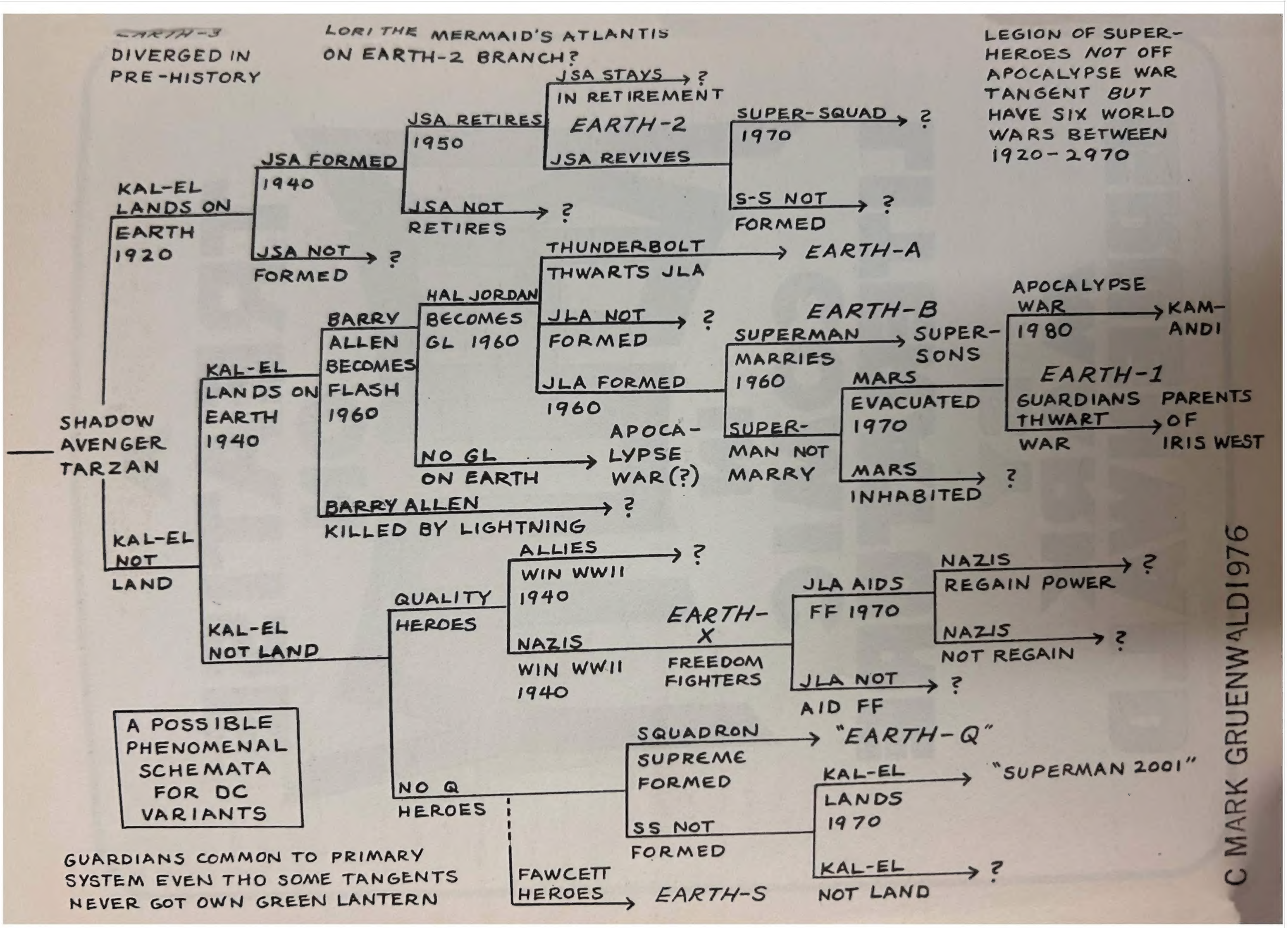
A TREATISE ON REALITY IN COMIC LITERATURE

BY

MARK GRUENWALD


EARTH-3
DIVERGED IN PRE-HISTORY
LORI THE MERMAID'S ATLANTIS ON EARTH-2 BRANCH?
LEGION OF SUPER-HEROES NOT OFF APOCALYPSE WAR TANGENT BUT HAVE SIX WORLD WARS BETWEEN 1920-2970
JSA STAYS IN RETIREMENT ?
JSA RETIRES 1950
EARTH-2
JSA REVIVES
SUPER-SQUAD 1970 ?
JSA FORMED 1940
KAL-EL LANDS ON EARTH 1920
JSA NOT RETIRES ?
S-S NOT FORMED ?
JSA NOT FORMED ?
THUNDERBOLT THWARTS JLA
EARTH-A
HAL JORDAN BECOMES GL 1960
BARRY ALLEN BECOMES FLASH 1960
JLA NOT FORMED ?
EARTH-B
SUPERMAN MARRIES 1960
SUPER-SONS
APOCALYPSE WAR 1980
KAM-ANDI
JLA FORMED 1960
MARS EVACUATED 1970
EARTH-1
GUARDIANS THWART WAR
PARENTS OF IRIS WEST
SHADOW AVENGER TARZAN
KAL-EL LANDS ON EARTH 1940
NO GL ON EARTH
APOCA-LYPSE WAR (?)
SUPER-MAN NOT MARRY
MARS INHABITED ?
BARRY ALLEN KILLED BY LIGHTNING ?
KAL-EL NOT LAND
ALLIES WIN WWII 1940 ?
NAZIS ?
QUALITY HEROES
EARTH-X
JLA AIDS FF 1970
NAZIS REGAIN POWER ?
NAZIS NOT REGAIN ?
KAL-EL NOT LAND
NAZIS WIN WWII 1940
FREEDOM FIGHTERS
JLA NOT AID FF ?
A POSSIBLE PHENOMENAL SCHEMATA FOR DC VARIANTS
SQUADRON SUPREME FORMED
"EARTH-Q"
NO Q HEROES
KAL-EL LANDS 1970
"SUPERMAN 2001"
SS NOT FORMED
KAL-EL NOT LAND ?
FAWCETT HEROES
EARTH-S
GUARDIANS COMMON TO PRIMARY SYSTEM EVEN THO SOME TANGENTS NEVER GOT OWN GREEN LANTERN
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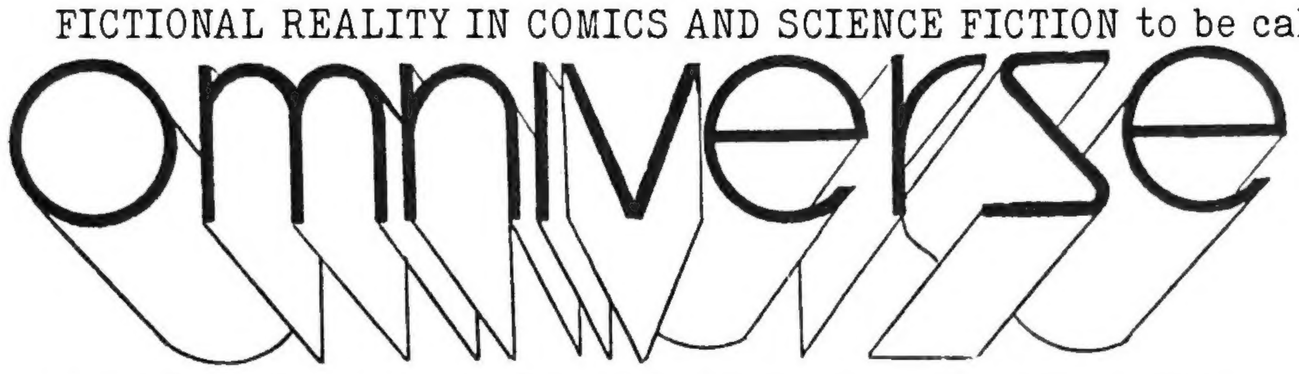
A MESSAGE FROM THE AUTHOR OF A TREATISE ON REALITY IN COMIC LITERATURE...

Dear Friends of Reality,

TORICL was intended to be the first word on the subject of reality in comic books, not the last. I hoped that its publication would generate interest in further investigations of the topic, perhaps even on a whole zine devoted to it. But I could not estimate if enough comic readers were interested in the decidedly esoteric topic of time and dimensions to support TORICL, let alone warrant further work. The response that TORICL has garnered since its release in July 1976 has been appreciable. Not only have I sold half of its print run before paid advertising, I've gathered enough written and verbal reactions to it to convince me that there exists at least a small audience for extrapolations about fictional reality.

So it is with pleasure I announce. . .

THE FORMATION OF A JOURNAL DEDICATED ENTIRELY TO THE FURTHER STUDY OF FICTIONAL REALITY IN COMICS AND SCIENCE FICTION to be called. . .



"Omniverse" is the word used in TORICL to describe the continuum of all possible universes. The word, like the zine itself, evokes the entire gamut of fictional realities. Omniverse will begin where TORICL left off. . .clarifying, expanding, and challenging all concepts pertaining to reality. Omniverse will include material not only about time and dimensions, but also the whole spectrum of scientific concepts utilized in the comics medium.

Work on Omniverse has begun. Features planned for the first issue of Om include articles about: The Differences Between the Realities of Howard the Duck and Uncle Scrooge, the Superman-Batman team of three Earths, Apokolips and the Great Disaster. . . Plus these regular features: Case Studies in Comics (a discussion of the latest comic stories pertaining to time and dimensions), Forum (expansions and objections to the Omniversal Theory), Case Studies in Science Fiction (a discussion of sf books pertaining to dimensions and time travel), and the Reality Survey (an indepth analysis of the reality of an entire comic series —Om #1 highlights the Flash and the Silver Surfer.

Omniverse cannot survive, however, without the support of everyone who has read TORICL. We need people to expound their views about the Omniversal Theory. We need people to write articles in the well-reasoned, well-documented style to which TORICL aspired. We need people to do illustrations to prevent Om from looking like a textbook. We also need monetary support to initiate the project with a suitable format. You, too, can help define the reality of Omniverse.

Omniverse is not for everyone. But if you saw the need for the Treatise, you can probably also see the need for further explorations in this exciting new field of study. If you have friends who care about fictional reality, turn them on to TORICL and Omniverse, too. With your support, Omniverse, could become perhaps the most unusual comics/sf zine ever assembled.

Send suggestions for articles, inquiries, and manuscripts to:

Mark Gruenwald
211 ~~319~~ W ~~86~~ 34th St. #~~15~~
NYC 10023

OM.
MARK GRUENWALD

Send $2 to reserve your copy of Omniverse #1 to:

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1260 Westhaven Dr.
Oshkosh, Wis 54901

Copies of TORICL still available at $2.50 from the Mail Order address above.
Coming soon: A Primer on Reality in Comic Books and the Writer's Guide to Reality.

an INDEX to mark gruenwald's A TREATISE ON REALITY IN COMIC LITERATURE

by

kim thompson

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CORRECTIONS

TORICL p. 20, line 15 should read: "...Reality Lines at 8 and 10 CPU."
TORICL p. 83, line 6 should read: "Premiere #14" not #12.
TORICL p. 85, entry 8 should read JLA #135 not #134.
Green Lantern #75 and Justice League #56 should not have been included in the Bibliography.

FOREWORD

This is the first major treatise (that I know of) on the subject of Reality as depicted in comic literature. This paper will provide a detailed examination of the evolution of the Parallel Dimensions concept, and further, present a theory that binds all the varied and sometimes conflicting representations of Reality into a single, self-consistent system of universes.

I was aware of the inherent problems in each of the intents of this project. To research the history of Parallel Dimensions, I had to rely primarily on any own resources (approximately three and a half thousand comics of Marvel and DC extraction) and thus risked overlooking something that merits discussion. To formulate a comprehensive theory of the structure of Reality, I had to take into account that it was NOT the primary object of the various writers, whose works are conelated herein, to present a picture of Reality in any way consistent with any other writer's depictions, but rather, it was their object to tell an interesting story.

So how does Reality enter the picture? Any work of fiction establishes its own reality for the duration of the work. In comics, where the general format is a continuing series of stories about a single character, the reality is basically the same from story to story, i.e., there is some consistency between established points of legend (such as "green rocks always weaken hero"). The reality for most fictional characters is usually very close to what we, the writer and readers of this treatise, call Reality, except that it allows for the existence of said character. With the advent of the first "crossover" story where the hero of one strip meets the hero of another, it could be surmised that the reality of each hero's world was the same. In other words, they both lived on the same fictional world. Finally, with larger aggregates of characters (such as the Justice Society), it became apparent that virtually ALL the characters of a given publishing outfit are living on the same fictional world.

However, as I noted a paragraph back, the writers of the heroes' chronicles are more interested in telling an entertaining story than maintaining Reality. If a given premise makes for an interesting story, would it really matter if that premise contradicts something in another character's book or even in the same hero's book thirty issues ago?

Marvel Comics should be applauded for undertaking, in light of its expansive line of books, the Herculean task of maintaining a consistent fictional universe.

Under the editorship of one person, the Marvel writers take pains to keep their stories consistent with those of their fellow writers and to tie up "loose ends" (even from discontinued books). Apparently Marvel believes that the effort to maintain a tidy framework in which all of their stories take place may have commercial appeal. A new reader may become enmeshed in the entire Marvel universe and expand his reading list while the longtime readers will not be alienated by careless continuity.

On the other hand, DC Comics has been under a multiple editorship system. While some editors may try to keep some semblance of continuity between their own books, it often appears as if other editors have open disregard for keeping their books consistent with their fellow editors'. However, as of this writing, steps have been undertaken to consolidate the DC line, thru the joint efforts of the new publisher and the fans-turned-pro writers. DC should also be applauded (as we shall see in the main body of this text) for establishing the groundwork for a systematic approach to multiple fictional universes, without which this paper would not be possible.

A casual perusal of this treatise will reveal that it is rather involved. While a majority of comic book enthusiasts may appreciate ray documentary zeal for my subject, there may also be many who view my theoretical scientific treatment of Reality and wonder what is the point of taking what is meant to be entertainment so seriously—perhaps more seriously than those whose works are correlated herein?

One of my hopes in writing this is that it will emphasize to comic writers the need to be aware of one's plot premises to avoid gross inconsistencies that are anathema to longtime readers' sensibilities. Many times a writer has not spitefully included inconsistencies, he has merely not thought thru his premise sufficiently. This paper, which imposes a universal order on the creations of many minds, is not meant to be a straitjacket on the imaginations of writers, present and future, but rather is meant to be a framework in which every depictionnof Reality has its place. It is true that some data has had to be reinterpreted to conform with the consensus of other data, and in some cases, entire phenomenon have had to be shown to be something other than they superficially appeared to be. It shall be up to the readers of this treatise whether my interpretations are defensible in light of the whole theory.

This treatise began as a ten-page article written en route to the New York Comic Art Convention in 1974. It never saw print in that form. One year later

I took the paper out of mothballs and decided to expand and clarify the concepts I lightly brushed upon. Working for two months, I produced about sixty percent of the present manuscript. Becoming hung up on certain aspects of Reality that I could not resolve to my satisfaction, I set it aside again, hoping that time would eventually provide me with the inspiration I needed to finish. In January of 1976 I completed this treatise.

All ideas not attributed to the writers of the various stories discussed are my own. I wish to thank David Lofvers, Myron Gruenwald, and David Truesdale for their comments and suggestions in preparing this text. They just wouldn't let me get by without explaining everything. As a result, I believe I have constructed a most definitive theory that encompasses the major aspects of multi-dimensional Reality. While it is possible to construct other systems of Reality, just as it is possible to construct non-Euclidean geometries, I believe my theory will stand as the most basic system that can be devised.

As I now examine may theory as a whole, I come to the conclusion that if one grants me two basic premises: that there exists more than one Reality, and that which separates the matter and energy of different realities is rate of vibration, my theory need not confine itself to Reality as depicted in comic literature. It my theory need not confine itself to Reality as depicted in comic literature. It should be able to describe "mainstream" Reality, as it were—non-fictional Reality. Perhaps at a later date I will delete all my references to comic books and present my theory on its own merits as an extrapolative mathematical construct.

However, this treatise as it now appears has been written to enhance my own appreciation of comic books as an important medium of ideas. Hopefully, this paper will have the same effect on the reader.

MARK GRUENWALD
16 January 76
Oshkosh, Wisconsin

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HISTORY

Superheroes are not real; nor are monsters, or time travellers, or invaders from outer space. To enjoy the sort of fiction that features such fanciful products of the imagination, one must have, to recycle Samuel Taylor Coleridge's oft-quoted phrase, " a willful suspension of disbelief." One must imagine that there exists a world in which superheroes, monsters, time travellers, and outer space invaders are real. One must imagine a separate reality, a fictional reality apart from that in which we live.

There is not just one fictional reality. Characters often seem to move about on Earths that are unique to them. There are often distinguishing differences in the reality of a character's world that are not reflected in other characters' worlds or our own. A single author may even depict more than one world: the Earth of H.G. Wells' War of the Worlds is not that of his The Time Machine.

Science fiction has provided fictional reality with a relationship to our reality. Science fiction has introduced the concept of "parallel dimensions"—worlds that co-exist in the same space as our Earth, but are somehow separate, out of synchronization with us. Just as there are probably an infinite number of ways to be out of synchronization, there could be an infinite number of fictional realities.

But the focus of this treatise is the comics. Comics, as offspring of the pulps that featured science fiction, carried over the parallel dimension concept into its visual presentation of imaginative tales (along with various other science fiction premises). Altho there were comic stories in the nineteen-forties and fifties featuring other dimensions, we will begin our study with the stories of the sixties. It is here that the theme was first presented as a science-fictional concept—one explained in terms of extrapolated science—rather than as a fantasy one.

DC COMICS

The comic story from which our present understanding of dimensions stems is DC's Flash #123 ("Flash of Two Worlds") by Gardner Fox. To explain what happened to our present-day Flash's predecessor of the forties, Fox wrote the story of how the Flash accidentally "vibrates" into another world very similar to the Earth he knew, but with some subtle differences. This world, which became known as "Earth-Two" in Flash #129, was discovered to be occupying the same physical space as

the Earth Flash had come from ("Earth-One"), but was vibrating at a different rate, making it invisible and intangible to those of the other Earth.[1] The stage of an auditorium in Central City was said to be a "focal point" between the two dimensions, facilitating dimensional travel. Once Flash had pierced the vibrational barrier, he was unaware of what he had done, indicating that he did not have to consciously maintain the new vibration rate to remain in that dimension. His body seemed to automatically attune itself.

In Justice League of America #21 ("Crisis on Earth-One"), Gardner Fox depicts the Justice League meeting for the first time their dimensional counterparts, the Justice Society of the forties, using magic to transcend the dimensional barrier. This was the first time that anyone other than the Flashes, who have control over their molecular structure, visited another Earth. No "focal point" was utilized. At the conclusion of the two-part adventure, the villains attempt to elude the heroes by locating a hypothetical "Earth-Three." Altho they are captured before they can find it, this is the first mention of the supposition that where there is one counterpart Earth, there are probably others.

In Justice League #29 ("Crisis on Earth-Three"), Gardner Fox confirms this supposition by having the JLA meet representatives of this third parallel Earth where history is a parody of that of "Earth-One" (and our own) what with Columbus discovering Europe, etc., and the major superhumans are villainous in disposition. It is interesting to note that the inhabitants of all three worlds unquestioningly accept the arbitrary designations for their worlds ("Earth-One," "Two," and "Three") altho no real relationship among them has been shown that would merit an ordering. At the conclusion of this two-part tale, the heroes imprison the villains of "Earth-Three" in the "vibrational barrier lands" described as existing between Earths.[2]

The Justice League's annual conclave with their "Earth-Two" counterparts has been a primary source of developments and modifications on the Parallel Earth concept.[3]

It isn't until Justice League #82 ("Peril of the Paired Planets"), the eighth JLA-JSA crossover, that someone tries to account for the predictability of the team-up. Author Denny O'Neil reveals that the "temporal mattrices" between the two Earths are in conjunction once per year during summer.[4] O'Neil carries the notion still farther in World's Finest #201 ("A Prize of Peril") by directly implying that the dimensional barrier can ONLY be transcended when the worlds are at the time of conjunction. In the story, Superman states, "(Doctor) Fate couldn't have crossed into this universe...his cosmos and ours aren't in conjunction at this time."[5] This would seem to indicate that the various "Earth-Two" crossovers

featured in Flash, Atom, and Green Lantern magazines had all taken place during the summer months regardless of the time of year the story had been published. Perhaps Superman meant that certain means of dimensional travel (such as Doctor Fate's magic) could only transcend the vibratory barrier at this mysterious "time of conjunction."

Writer Len Wein remedies this "time of conjunction" matter in Justice League #107 ("Crisis on Earth-X") by providing the JLA and JSA with a machine that alters the vibratory speeds of molecules and thus is able to transcend Earths regardless of the time of year. The machine was named the Transmatter Cube.[6] Still no mention was made of what cosmic force made two dimensions occupying the same space more in alignment at a certain time of year, or what methods of dimensional travel were unable to transcend dimensions at times out of conjunction.

Also in the previously-mentioned. Justice League #82, O'Neil explained that due to a slower rate of vibration on "Earth-Two," time passed slightly more slowly, and "Earth-Two" will reach "mankind's ultimate destiny--or ultimate doom--twenty years later than the creatures of Earth-One."[7] In other words, at the end of eternity, "Earth-Two" will be twenty years out of synchronization. But what is the time difference at present? According to Flash #123, it is the same date on both Earths: the first thing Flash did when he realized he wasn't where he thought he was, was to buy a newspaper to check the date to see if he accidentally travelled thru time. The date was the same. Since it was daytime on both "Earth-One" and "Earth-Two," one can narrow down the time difference to a matter of hours at most.

O'Neil's introduction of the time variance has caused a good deal of confusion to later writers, resulting in a story (Justice League #123) in which a character erroneously states, "The idea is that Earth-Two is about twenty years behind (Earth-One) because of some time-flux."[8] It seems likely that O'Neil was attempting to explain the JSA's vitality (considering that they are twenty years older than their JLA counterparts) by asserting that they do not age as rapidly.

O'Neil's final contribution to the Parallel Earth concept was in Justice League #83 ("Where Valor Fails, Shall Magic Triumph?"). In it, Green Lantern states, "Look, we know there are an infinite number of existences...countless worlds like our own existing simultaneously."[9] This is the first time a character states the infinity phenomenon outright. Up until this point, one could only surmise that the heroes extrapolated the existence of other parallel dimensions than the few they had actually set foot upon.[10]

The next writer to contribute to our knowledge of Parallel Dimensions is Gary

Bates in Flash #179 ("The Flash—Fact or Fiction"). In the story, the Flash accidentally materializes on what would appear to be the "real" Earth—where superheroes exist solely in the pages of comic magazines. For some reason, Flash's normal method of vibrating is incapable of transporting him from this dimension. With the aid of the editor of Flash comics, he builds a duplicate of the Cosmic Treadmill, a device customarily used to break the time barrier.

In Flash #228 ("The Day I Saved the Life of the Flash"), Cary Bates has himself mysteriously teleported to "Earth-One" where he finds that the plots he puts in his comic stories shape the reality of "Earth-One."[11] In Justice League #123 ("Where On Earth Am I?"), Bates once again grants himself this "plotting power" on "Earth-One," but inexplicably fellow writer Elliot Maggin does not display a similar ability in the course of the tale. Apparently all writers do not have this natural talent on "Earth-One," only mutants like Cary Bates. Justice League #123 also provides a designation for the "real" Earth Bates and Maggin come from: "Earth Prime."

Besides parallel Earths, there are other dimensions depicted in comics that are also said to occupy the same physical space as Earth, but do not resemble Earth in regard to landform, natural laws, type of intelligent life, etc. Altho these dimensions were introduced even earlier than Earth-variant types (and thus a catalog of them would be more numerous), their characteristics and relationship to Earth have not been delved into to any appreciable degree. There is little more we can say about them at this point than to categorize them.

Non-Earthlike dimensions can be categorized in three major groups: alien dimensions, magical dimensions, and mythological dimensions. Alien dimensions are probably the most often depicted type, but we will limit our examples to a single archetypal character: Despero of the dimension Kalonar introduced in Justice League #1 ("World of No Return"). Despero, possessing magenta-colored skin, a finned head, and a third eye, travels between dimensions by a spaceship-like vehicle. Magical dimensions, the second most numerous kind, are best represented by the "Fifth Dimension" from which hails Superman's prankish nemesis, Mr. Mxyzptlk. Somewhat akin to the magical dimensions are the mythological ones. The distinction between them is that the beings from these mythological dimensions have entered into the folklore or religions of Earth. The major mythological dimensions are Olympus, home of the Roman gods who gave Wonder Woman her powers and weapons, and New Genesis/Apokolips (introduced in New Gods #1), a super-scientific world of beings with incredible powers, who travel to Earth by means of a dimension-piercing device called the Boom Tube.

Dissimilar to all of the previously-described dimensions are the anti-matter universes. Anti-matter, which can actually be laboratory-synthesized, is matter where the atomic particles spin in the opposite direction, hence having a negative charge. Scientists have extrapolated the existence of a whole universe of anti-matter along side our own. Green Lantern #2 ("The Secret of the Golden Thunderbolts") introduced the anti-matter world of Qward, a realm where "Evil" is the norm instead of "Good." Qward is accessible by means of a hole in the air called a "Transformer Bridge" which converts positive matter into negative matter and vice versa. Justice League #46 ("Crisis Between Earth-One and Earth-Two") establishes a being either from another world in the Qward dimension or from another whole anti-matter universe. The aptly-named Anti-matter Man strides the cosmos between dimensions apparently unaware that his negative matter could annihilate any positive matter it came in contact with.[13]

In summary, it is DC Comics that opened the way to a scientific understanding of the Parallel Dimensions phenomenon, as well as describing many of its major features. But as we shall see in the following section, Marvel Comics has contributed its share of important developments in our still-emerging picture of the multi-dimensional complexity of that which we call Reality.

MARVEL COMICS

For a long time prior to introducing their first parallel Earth, Marvel depicted non-Earthlike dimensions. First and foremost is Asgard, home of Thor and the Norse Gods (first visited in Journey Into Mystery # 88) accessible by the Rainbow Bridge Bifrost. Magical dimensions were also a mainstay of the early Marvel mythos, particularly in the pages of the Dr. Strange strip. Greatest of Dr. Strange 's enemies was Dormammu (first appearing in Strange Tales #126), a mystical being with a flaming green head who lived in an unspecified magic dimension. Alien dimensions were also prevalent in early Marvels, such as the "Fifth Dimension" appearing in Strange Tales #102 (starring the Human Torch) or "Dimension Z" in Tales to Astonish #49 (starring Giant-man).

Also prior to parallel Earths, Marvel featured an anti-matter universe called the Negative Zone. In Fantastic Four #51 ("This Man, This Monster" by Stan Lee) Reed Richards invents "a huge radical cube designed to create a dimensional entrance" to the Negative Zone.[14] Later, the denizens of this dimension were depicted: Blastaar (Fantastic Four #62) who looks like a humanoid lion, and Annihilus (Fantastic Four Annual #6), a mutated insect. Apparently these vastly divergent

life-forms were from different worlds in the same anti-matter universe.[15] Later, in Captain Marvel #16 ("Behind the Mask of Zo," by Archie Goodwin), the Captain is inexplicably teleported to the Negative Zone, but by means of "nega-bands," he was able to exchange his atoms with Earthman Rick Jones for a few hours of positive life.

The development of the Parallel Earth concept was initially retarded by the fact that head writer Stan Lee did not use the dimensional phenomenon to explain where all the "Golden Age" characters (from the Timely-Atlas line that metamorphosed into Marvel) had been since the forties. Instead of assigning them to another Earth, all the forties characters were said to still be on the mainstream Marvel Earth, tho most of them had retired. The Captain America and Sub-mariner of the sixties were the very same entities as those in the forties, whereas the Superman and Batman of the forties were now considered by DC to be the "Earth-Two" counterparts.[16]

The ground-breaking first Parallel Earth tale was written by Roy Thomas in Avengers Annual #2 ("And Time the Rushing River"). The story begins after the Avengers have taken a jaunt into the past using Dr. Doom's time machine. Returning to the present, they learn that nobody has ever heard of them. Not only that, the original team of Avengers are still assembled, and at the instruction of the being called the Scarlet Centurian, have wiped out every other superhero and supervillain on Earth. At the end of the adventure, Goliath monkeys around with the time machine's controls, causing the Centurian and his partners to do a fade-out. When the Avengers have returned to their own reality, they are not even aware the adventure took place since the omniscient Watcher saw fit to cleanse their memories. It is interesting to note that the alternate reality was never actually called a parallel Earth, and the world was apparently prevented from coming into being at the story's end.

The first parallel Earth story that admitted to being a Parallel Earth story was also scripted by Roy Thomas and appeared in Avengers #85 ("The World is Not For Burning"). In this adventure, four Avengers accidentally materialize on an unnamed parallel Earth where the main body of superheroes is the Squadron Supreme (who incidentally resemble the Justice League to a remarkable degree). At the end of the two-part adventure, the Vision comments that altho they seem to have returned to their rightful dimension, there's no way to know for sure. This insight is profound: How can one be certain he returned to his "proper" dimension and not one so similar that one might never be aware of the subtle differences in Reality?

In Fantastic Four #118 ("What Mad World), another dimensional Earth is es-

tablished, courtesy of writer Archie Goodwin. In this story, the Thing is teleported to a parallel Earth by the dimension-hopping dog Lockjaw, in which it is Reed Richards, not himself, who became the rock-skinned Thing.

Not truly a dimensional Earth, but having many characteristics of one is Counter-Earth, introduced in Marvel Premiere #1 ("And Men Shall Call Him Warlock") by Roy Thomas. Counter-Earth is a planet created by the High Evolutionary to be an exact replica of Earth except that "Evil" was never allowed to proliferate. In Warlock #1 ("The Day of the Prophet"), the planet was moved one second out of synchronization with the Marvel Earth. Since Counter-Earth was laboratory-created instead of natural, and does not occupy the same physical space as the other Earth (the High revolutionary placed it in Earth's orbit on the other side of the sun), it is not truly a dimensional Earth.[17]

In Adventure Into Fear #19 ("The Enchanter's Apprentice"), writer Steve Gerber provided a definitive statement about the dimensional nature of Reality. In the words of Dakimh the Enchanter: "Now, simply stated, the cosmos works thus: on any given world where life is present, every possible permutation of 'reality' exists. They exist in the same space-but on different dimensional planes. Indeed, what is reality on any one such plane is mere fiction on all the others. All is real, all is illusion."[18] In Man-Thing #1 ("Battle for the Palace of the Gods"), the Enchanter explains what a model of Reality might look like: "Imagine...that the normal structure appears thus: ascending levels, held in delicate balance, a hair breadth apart. This however is the current state—chaos. Every level collapsed upon another. Where any two of these levels touch, a juncture point is created—a dimensional bridge of sorts."[19]

Also significant in Gerber's two-part tale mentioned above is the introduction of a character whose theoretical implications are far-reaching. This character is Howard the Duck, a Disney-inspired "cartoon" character who comes from a dimension where cartoon characters are real. This meeting between "realistic"[20] Marvel heroes and a cartoon character is an indication that somewhere even talking ducks, friendly ghosts, and beagles who think they're World War I flying aces may be real. In other words, there may be no such thing as a "fictitious" or "literary" character, no matter how bizarre or absurd the character might appear. In an infinite number of parallel universes, there is room for everything imaginable to be real—somewhere.[21]

In summary, despite Marvel Comics' belated entry into theoretical nature of parallel dimensions, its later contributions supplemented and enriched the body of knowledge already amassed at DC.

KNOWNS

Before we proceed with the formulation of a theory that encompasses all of the many facets of the dimensional phenomenon, let us outline all of the "Knowns" we have to work with:

1 There are an infinite number of parallel worlds that exist in the same physical space.

2 These worlds are separated from one another by the unique rate of vibration possessed by all matter of the same world.

3 To transcend the dimensional barrier between parallel worlds, one's vibration rate must be attuned to that of the new dimension.

4 Some dimensions appear to be easier to vibrate into, if one can judge by the frequency of visits to the same dimension. In other words, some vibration rates seem easier to attain.

5 Once attuned to a new vibration rate, an organism demonstrates no tendency to slip out of attunement and back into one's original dimension.[22]

6 Evidence supports the existence of:

A "Focal points" and "Nexuses" between dimensions, i.e., points of easy access.

B "Times of conjunction," i.e., when two dimensions appear to be in cosmic alignment.

Despite these phenomena, it is possible to transcend the vibratory barrier regardless of location or time of year.

7 Some parallel worlds are variations on Earth reality, while others do not resemble Earth at all in regard to landform, type of intelligent life, natural laws or permutations of history.

8 There are also dimensions composed of anti-matter.

9 "Vibrational barrier lands" exist between parallel Earths.

10 Glimpses of other dimensions come to certain people in dreams or in visions.[23]

11 In an infinite number of universes, there is enough room for everything to be real somewhere.

DIMENSIONS

At the onset, we should clarify some basic terminology. As is probably evident from the previous section, the terms "dimension," "universe," "parallel Earth," and "cosmos" have always been used somewhat interchangeably. Perhaps the term "parallel universe" would be most inclusive, for when we speak of the reality of any given parallel world (Earth or otherwise), we are not excluding the space in which that world is a part——a space that ultimately encompasses the whole universe that the world is in.[24] Yet to distinguish a universe where there is an Earth-variant planet vibrating in the same space as Earth, the label "parallel Earth" is most descriptive. The generic term "dimension" will refer to all systems of homogeneous reality, whether an Earth-variant or not. It will be sufficient for our purposes to define "reality" as "the transient state of being comprised by empirical phenomena, universal in scope, produced by one and only one sequence of other states of being."

The main thesis that will be demonstrated is that all the parallel dimensions depicted in comic literature fit into the framework of a SINGLE UNIFIED CONTINUUM OF PARALLEL DIMENSIONS, each with a special and specific relationship to one another. We shall call this single unified continuum THE OMNIVERSE. We will propose Postulates governing Reality and explore the implications of Parallel Dimensions to a depth heretofore unattempted. To understand the framework of our discussion, a basic knowledge of mathematics will be necessary.[25]

PARALLEL EARTHS

From our preceding list of "Knowns" we can glean our first fundamental assumption: that the molecules of all matter in a single dimension vibrate in tune with a universal "pitch."[26] Let us phrase that as our first Postulate: ALL MATTER VIBRATING AT THE SAME RATE IS TANGIBLE (OR "REAL") ONLY TO OTHER MATTER VIBRATING AT THAT RATE. To empirically prove this, one would have to measure the vibration rates of matter. But in order for any instrument to record a vibration rate, it would have to have the vibration rate of the matter it was recording in order to exist in the same dimension. As such, there may be some doubt as to the objectivity of its calculations. Without an external reference point, vibration rates would be a difficult thing to measure. Despite our inability to gather experimental authentication, we must proceed as if vibration rates were a measurable phenomenon in order to establish any theoretical relationships between dimensions at all.

We will use the term "CYCLES PER UNIT-TIME" (abbreviated "CPU") to express

vibration rates. A "Cycle" is one performance of a vibration, while "Unit-time" shall be left undefined since we do not know what unit would be relevant to the Omniversal scale. Since we cannot use the expression "CPU" experimentally, it is actually just a mental construct, like much of mathematics.

If we confine our vibration rates to just whole numbers for the time being, we can postulate: THERE COULD EXIST A DIFFERENT PARALLEL DIMENSION WITH ITS OWN PLANE OF REALITY TO CORRESPOND TO EVERY WHOLE NUMBER. Since there is an infinite set of whole numbers, we have room for an infinite number of dimensions to be placed on a continuum (one of our "Knowns"). On these infinite number of dimensions could easily be assigned all the separate realities depicted in comic literature without appreciably diminishing the number of unassigned dimensions. But a simple cataloging of dimensions does not reveal their special relationships to one another within a unified framework.

In order to establish relationships, we are going to have to make some fundamental assumptions. Our first such assumption will be that DIMENSIONS WITH WHOLE-NUMBER VIBRATION RATES ARE EARTH-VARIANT TYPES.[27] Our second shall be that parallel Earths with similar phenomenal characteristics are more related to one another than those with dissimilar characteristics. For example, the incarnation of the same hero (such as Superman) on more than one variant would be a strong indication that the reality of the two worlds was related somehow. Thus "Earth-One" is more related to "Earth-Two" than to "Marvel-Earth."[28]

In our arbitrary assignment of numbers to correspond to vibration rates (in CPU) of various dimensions, we must find numbers that will express those phenomenal relationships mathematically. Let us assume that the vibration rates of two related Earths are WHOLE NUMBER MULTIPLES OF SOME PRIME NUMBER VIBRATION RATE. For example, 4 and 8 are whole number multiples of the prime number 2; and 10 and 15 are whole number multiples of the prime number 5. Let us call all Earths that can be demonstrated to have some phenomenal relationship part of the same PRIMARY SYSTEM.

Since our second Postulate states that EVERY whole number could have an Earth assigned to it, we cannot exclude the prime numbers (numbers which have no other factors than 1 and themselves) from our assignments. Let us call those Earths whose vibration rates correspond to prime numbers PRIME EARTHS.[29] Prime Earths are the root worlds of the Primary Systems.

At this point we are faced with a momentous question: did all the infinite number of vibrational Earths spring into being at or near the origin of the universe (commonly referred to as "Creation")[30] or are there new dimensions constantly spring-

ing into being, which are new multiples of a Prime Earth? The crux of the question is this: if the reality of two parallel Earths was EXACTLY the same, moment by moment, up until a given moment—for example, something spectacular like the Nazis winning World War II, or President Kennedy being missed by the assassins' bullets—have there been two separate dimensions vibrating at different rates up until that moment? After careful consideration, the more reasonable answer would be that there are not two identical dimensions originating at "Creation" only to differ in the year 1945 or 1963. Rather, dimensions are coming into being constantly, branching off existant roots. At "Creation," the possibility for an infinite variety of realities sprang into existence, not those infinite varieties themselves. We shall have more to say on this matter in the section entitled "The Omniverse."

Our third Postulate shall be: NEW DIMENSIONS ARE CONSTANTLY BEING CREATED FROM EXISTANT DIMENSIONS WHENEVER A DIVERGENT FACTOR OCCURS. Before delving into the issue of what events are significant enough to cause a divergence, let us construct a diagram of Reality to augment our understanding of the dimensional structure.

In FIGURE 1, the first six prime numbers (excluding 1 which shall be discussed in "The Omniverse") have been plotted on a vertical axis. This vertical line shall be our chronological starting point, representing the instant that the Prime Earths (that vibrate at each prime number CPU) came into being. From each prime number is plotted ATOMIC INSTANTS in a chronological sequence. An Atomic Instant represents EVERYTHING that occurs EVERYWHERE in a single dimension during one "instant" of time.[31] The line we get connecting the Atomic Instants is the REALITY LINE of each dimension.

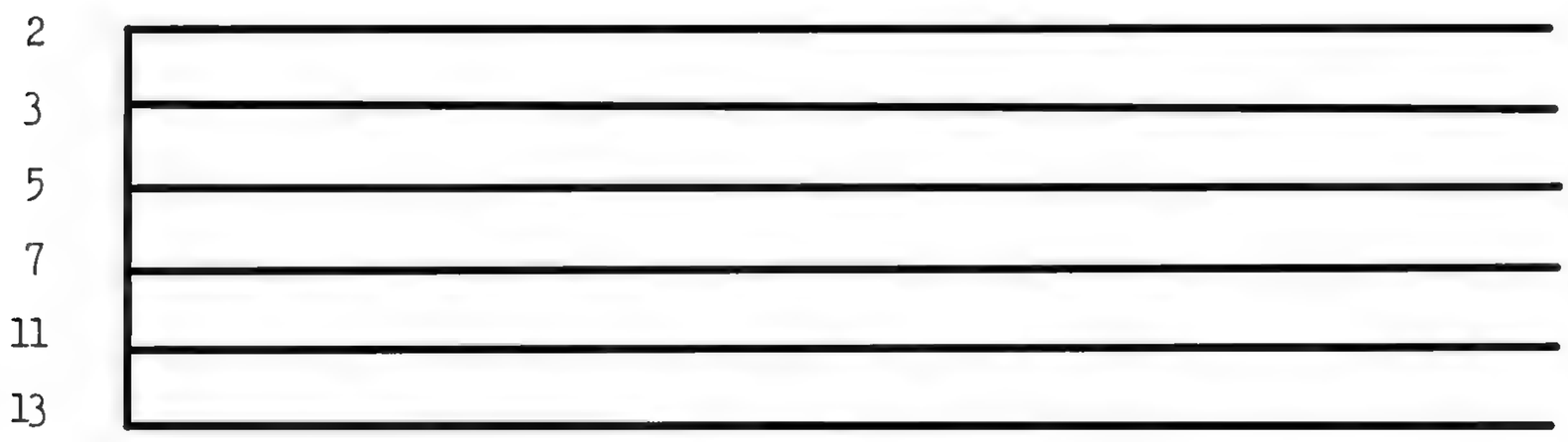


FIGURE 1

One will note that the Reality Lines are drawn parallel to one another. The reason for this is that non-parallel lines in a two-dimensional space such as our diagram would eventually meet, and that point of intersection would correspond to a single Atomic Instant. Since differences in Reality are cumulative, no two series of different Atomic Instants could spontaneously have an Atomic Instant precisely alike. Hence, Reality Lines can be said to be parallel.[32] It is important to stress

at the onset that we are constructing a DIAGRAM of Reality, designed to depict mathematical relationships between dimensions. This diagram should not be mistaken for Reality itself and more than a map should be mistaken for terrain.

In FIGURE 2, we illustrate what happens to a Reality Line when a Divergent Factor takes place: a single Reality Line stemming from a single prime branches into TWO [33] new Reality Lines, each with their own unique whole number vibration rate.

FIGURE 2

One will note that when the Reality Line diverges into two, neither line is represented at the original vibration rate. In other words, the vibration rate of the root world has ceased to be, and Prime Earths are a very short-lived phenomenon. We will demonstrate what the vibration rate of the two divergent dimensions becomes after addressing ourselves to the nature of Divergent Factors.

What determines what events are significant enough to become a Divergent Factor—to cause the reality of an entire dimension to split into two? How does one know if a penny slipping thru a hole in one's pocket won't change the course of history (i.e., Reality)? If one allows that every single decision that every sentient being makes, and every natural event anywhere changes the Reality Line significantly,[34] the vibration rate would change every Atomic Instant, rendering any sort of study meaningless. So one must accept the premise that certain people[35] and certain events are more important to the course of Reality than others. But who is to determine which people and which events these are? Perhaps omniscient galactic beings like The Watcher or The Oracle,[36] but certainly not writers of treatises on Reality in comic literature. The only way that Divergent Factors can be identified is empirically from hindsight.[37]

Now then, what would the vibration rates of the two newly-diverged Earths be? First, we know they cannot be equal to one another because, by definition, two dimensions vibrating at the same rate are only one dimension. Second, we know that neither can retain the original vibration rate of the root world, because that would indicate that one Reality Line was "proper" and the other "deviant." The existence of one dimension whose reality was "proper" would mean that its reality was predestined according to some unseen plan. The very foundation of our infinite dimensional theory is ultimately that all permutations of reality are equally legitimate. The existence of infinite varieties of reality cannot be intellectually

justified if only one were meant to be the "true course" of reality. So then, a given vibration rate must "die" while "giving birth" to its two divergents. Third, we know that the old vibration rate cannot split into two unequal additive parts, because, as one can readily see, we would soon run into fractions of whole numbers within a few successive divisions of the lower prime numbers. Fractional vibration rates will be discussed in detail towards the end of this section.

Hence, we know all the rates which cannot be produced when two dimensions branch off from their root, so what can it be? From our basic knowledge of the characteristics of sound, we know that a given vibration rate inherently possesses harmonic overtones in its frequency. These overtones are whole number multiples of the original vibration rate. We can now make our fourth Postulate: WHEN A DIMENSION DIVERGES, IT FORMS SEPARATE DIMENSIONS AT HARMONICS TO ITS PRIMARY VIBRATION RATE. One will note that we now have scientific verification to support our earlier utilization of multiples to demonstrate the mathematical relationship between the vibration rates of related Earths. If parallel dimensions truly exist separated vibrationally, then Harmonics will be the only way to approach their scientific study.

FIGURE 3 illustrates how the inherent harmonics of a given prime vibration rate becomes the new vibration rates for diverging dimensions.

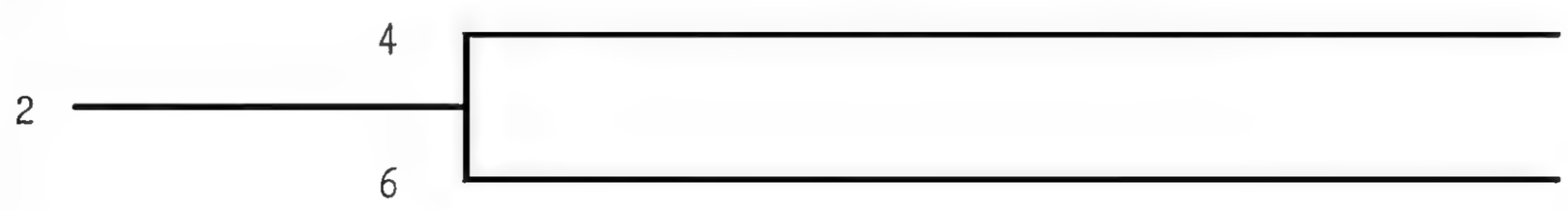


FIGURE 3

Just as the inherent harmonic rates become ACTUALIZED by a Divergent Factor, causing the former vibration rate to pass out of existence, new harmonic rates (as yet unactualized) come into being with a divergence.

We shall refer to Earths whose vibration rates are whole number multiples of a prime number vibration rate as HARMONIC EARTHS. All dimensions within a Primary System are Harmonic Earths.

The fact that vibration rates of entire dimensions automatically change into harmonic rates when a Divergent Factor occurs will enable us to better explain why some Earths seem more vibrationally accessible to travellers from a given Earth.[38] The same overtones in one's vibration rate which permits universal re-attunement during a divergence also permits travel between Harmonic Earths. To word it as a Corollary to our Postulates: DIMENSION TRAVEL IS MOST EASILY FACILITATED BETWEEN DIMENSIONS WHOSE VIBRATION RATES ARE HARMONIC TO ONE ANOTHER. Thus, when the Flash

vibrated from a Central City auditorium in Flash #123 and found himself on "Earth-Two," he was slipping into a nearby, easily-accessible Harmonic Earth. It is theoretically possible to attune one's vibrations to a rate not harmonic to one's own, but it is not nearly as simple as pure harmonizing and may possibly have detrimental effects on an organism which undergoes it.[39] We will discuss Dimension Travel in all of its facets later in this section.

According to FIGURE 3, Harmonic Earths would all be a part of the same Primary System. But, one will note that we were only charting one Primary System. When we plot the next one as in FIGURE 4, we find a confusing thing occurring: a given vibration rate could be graphed on more than one Reality Line.

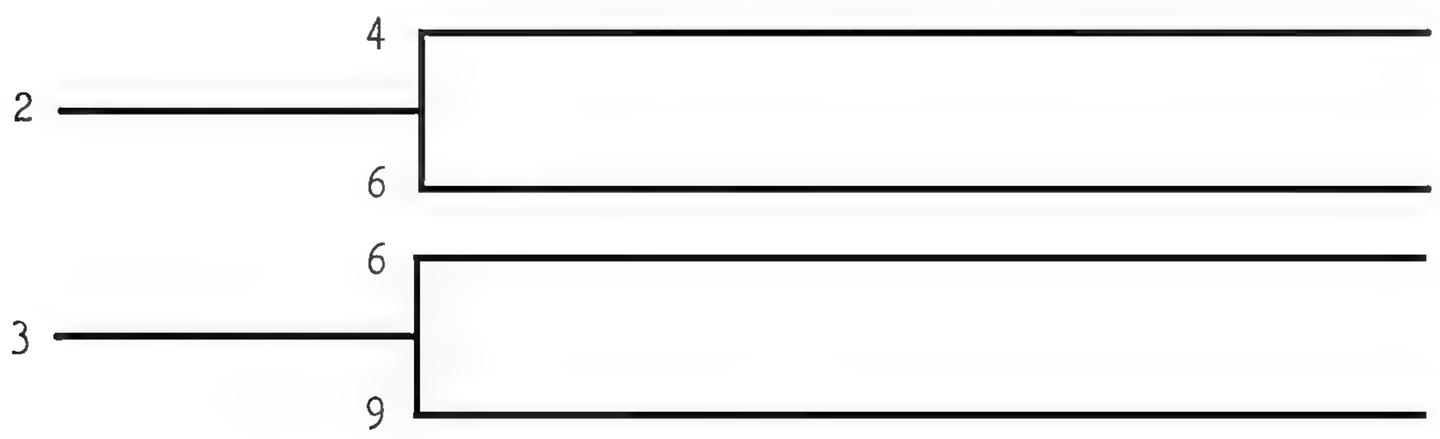


FIGURE 4

Note in FIGURE 4 that 6, being a product of both 2 and 3, could legitimately stem from either Prime Earth. But it CANNOT stem from both as in FIGURE 4, because it is impossible for two separate, dissimilar pasts to produce an identical present for even the duration of one Atomic Instant.[40] Mathematical probability would indicate that each of the dimensional Earths would continue to get more dissimilar as the number of random differences accumulate. So, which dimension gets the vibration rate 6 CPU? The most likely answer would be: whichever dimension diverges first would claim it.[41] Thus when the second Primary System diverges, it could only assume those rates which weren't already taken. FIGURE 5A and 5B illustrates this phenomenon.

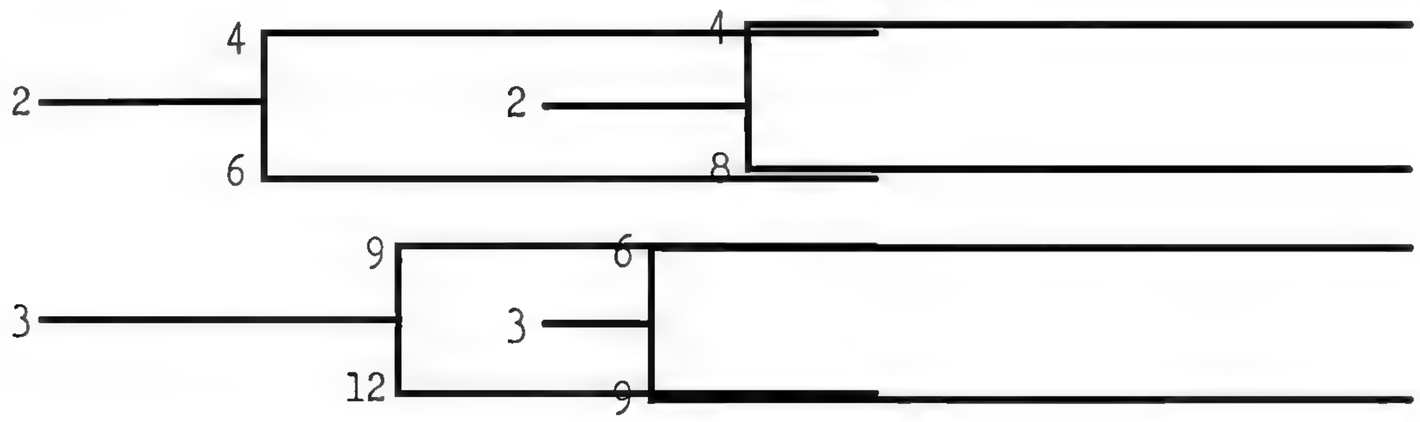


FIGURE 5A

If the Prime Earth at 2 CPU diverges before 3 CPU, the Harmonic Earth at 6 CPU becomes part of the 2 Primary System.

FIGURE 5B

If the Prime Earth at 3 CPU diverges before 2 CPU, the Harmonic Earth at 6 CPU becomes part of the 3 Primary System.

One will note that within the same Primary System, it doesn't make much difference which of the two newly-diverged Earths gets the closest harmonic multiple. The only way one could determine which dimension did get it is to go to each dimension and measure the vibration rates, but as we pointed out earlier, we do not yet have the instruments to verify anything in this treatise experimentally.[42]

In order to give a better indication of the complexity of Reality, we have extended our diagram to include the first six Primary Systems. FIGURE 6 depicts but one of the countless patterns Reality could take and includes vibration rates for the first 50 whole numbers (with the exception of 1 and the ten prime numbers after 11).[43] The order of the divergences are arbitrary.

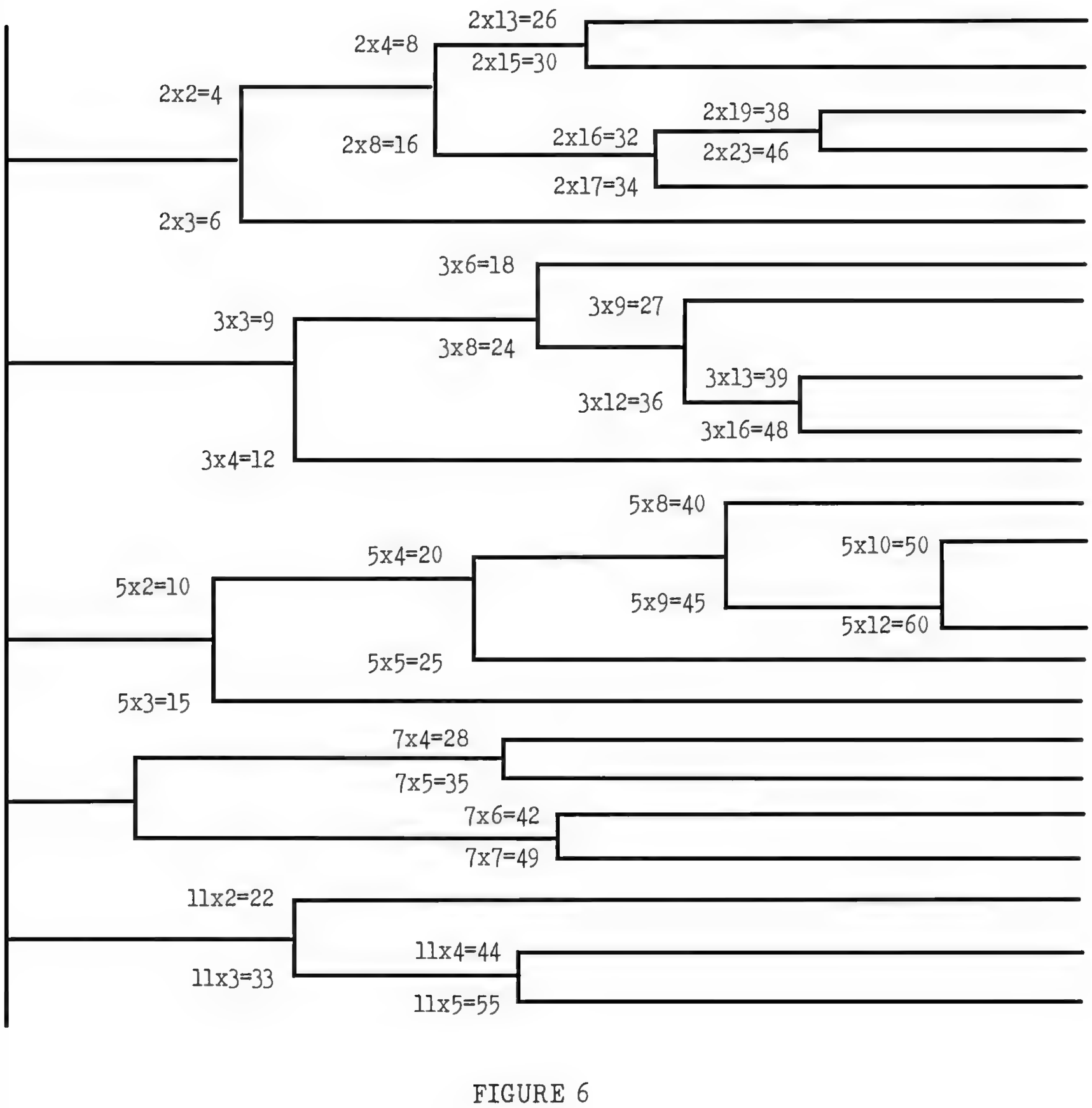


FIGURE 6

Let us now refer to a previous diagram, FIGURE 5. In FIGURE 5A, the Harmonic Earth at 6 CPU is a part of the 2 Primary System. But wouldn't that Earth still have a relationship to the 3 Primary System by virtue that it is still a part of the harmonic sequence of 3 (i.e., 3, 6, 9, 12, 15...)?[44] Yes, it is still harmonic to all the Earths in the 3 Primary System even tho it is not a part of that system itself. We shall call Earths that are products (or multiples of products) of two Prime Earths TRANSITIONAL EARTHS.[45]

Avengers #85 provides us with an example of a Transitional Earth: the world of the Squadron Supreme. Why is this Earth transitional? The fact that the Squadron is a counterpart to the Justice League of "Earth—One," hero for hero, would seem to indicate that it is a part of the same Primary System "Earth—One" is in.[46] Yet the heroes from "Marvel Earth," decidedly not in the same Primary System as "Earth—One," were able to vibrate into it with no apparent difficulty. The Squadron's Earth, in order to be accessible to other Primary Systems than its own must be a Transitional Earth.

In FIGURE 7, we illustrate accessibility between Earths of two different Primary Systems.

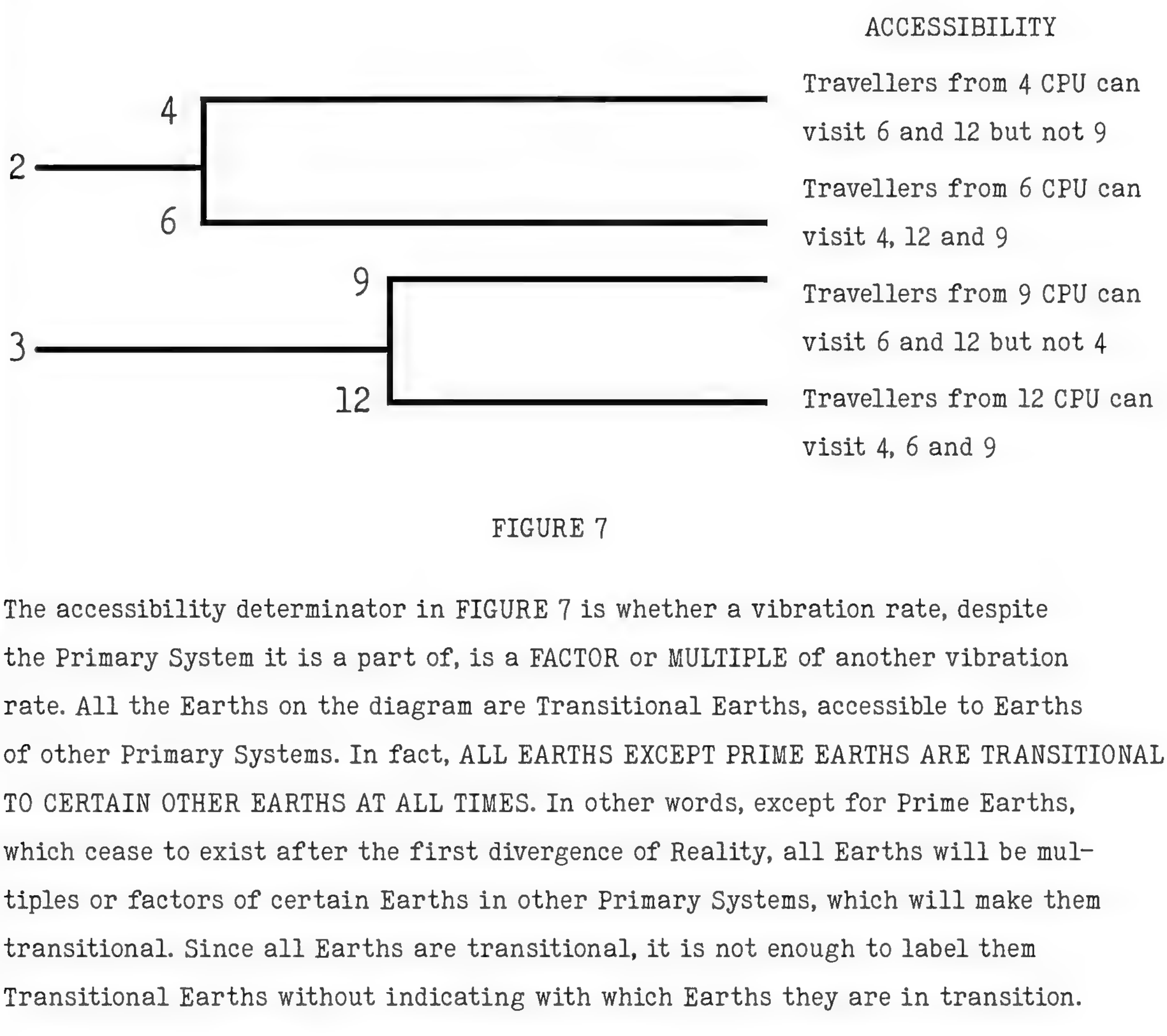

ACCESSIBILITY
4
2
6
9
3
12
Travellers from 4 CPU can visit 6 and 12 but not 9
Travellers from 6 CPU can visit 4, 12 and 9
Travellers from 9 CPU can visit 6 and 12 but not 4
Travellers from 12 CPU can visit 4, 6 and 9

FIGURE 7

The accessibility determinator in FIGURE 7 is whether a vibration rate, despite the Primary System it is a part of, is a FACTOR or MULTIPLE of another vibration rate. All the Earths on the diagram are Transitional Earths, accessible to Earths of other Primary Systems. In fact, ALL EARTHS EXCEPT PRIME EARTHS ARE TRANSITIONAL TO CERTAIN OTHER EARTHS AT ALL TIMES. In other words, except for Prime Earths, which cease to exist after the first divergence of Reality, all Earths will be multiples or factors of certain Earths in other Primary Systems, which will make them transitional. Since all Earths are transitional, it is not enough to label them Transitional Earths without indicating with which Earths they are in transition.

Also note, in reference to FIGURE 7, that travellers from two Earths which

are not in transition to each other (4 and 9) could rendezvous on a mutually accessible Earth (such as 6 or 12) altho they could not travel to one another's home worlds.

Let us consider what happens to the Transitional Earths of FIGURE 7 when one of the four Reality Lines diverges. FIGURE 8 illustrates.

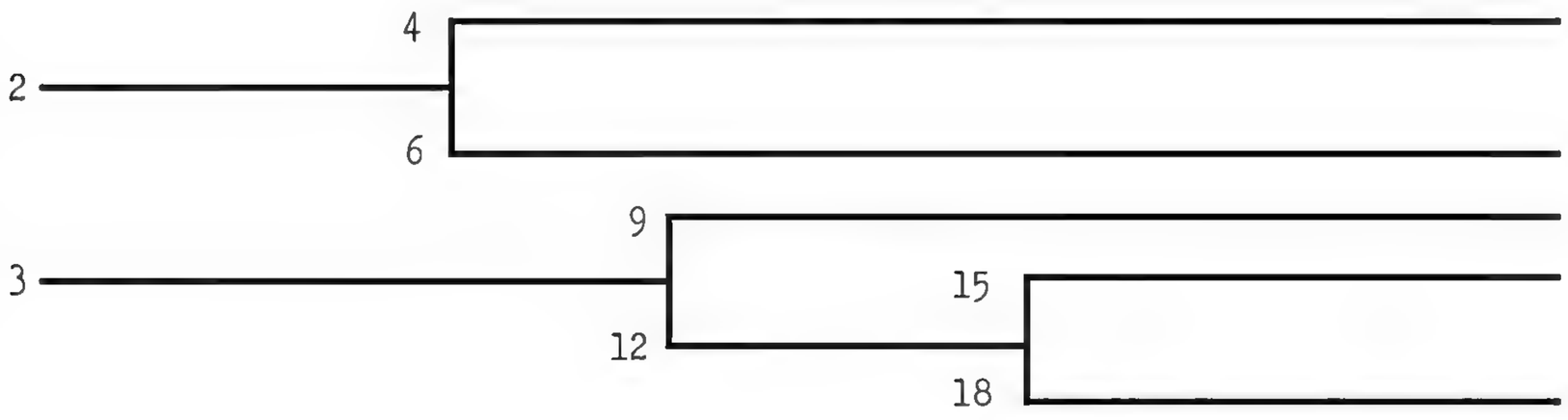


FIGURE 8

In FIGURE 8, the Reality Line at 12 CPU has diverged into Reality Lines at 15 and 18 CPU. Whereas, before the divergence, 12 was accessible by both 4 and 6 of the 2 Primary System (making 12 a Transitional Earth of 4 and 6 CPU), now 4 and 6 still have access to 18 CPU (since 18 is a part of the 2 Primary System's harmonic sequence), but no longer have access to the other newly diverged Earth, 15 CPU. 15 is not a part of the 2 Primary System's harmonic sequence. FIGURE 8 demonstrates that there is a changing relationship of Earths in transition.

If the Earth at 4 CPU would diverge, the two resulting Earths would be as shown in FIGURE 9.

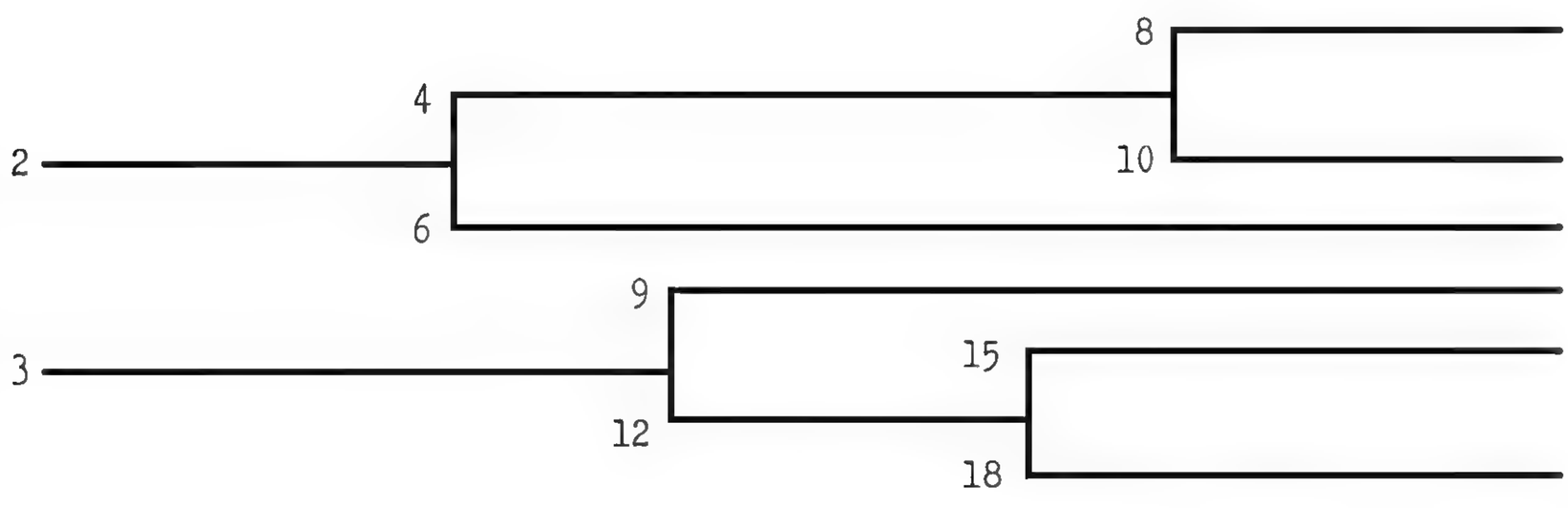


FIGURE 9

In FIGURE 9, the Reality Line at 4 CPU has diverged into Reality Lines at 9 and 10 CPU. Are either of these Earths now in transition with the formerly inaccessible Earth at 15 CPU? At first glance, 10 CPU would appear to be in transition with 15 CPU (since they both have in common the factor 5) yet this is NOT the

case. 10 and 15 are a part of the harmonic sequence of the 5 Primary System (not charted) but that is not the harmonic sequence that determines transition in this case. The harmonic sequence of the 2 Primary System (of which 10 CPU is a part) and the harmonic sequence of the 3 Primary System (of which 15 CPU is a part) are the determiners. The only Earths that can ever be transitional are found in a given world's inherent harmonic sequence. 15 is not a harmonic of the 2 Primary System that produced 10, so 10 and 15 are inaccessible in FIGURE 9's pattern of divergences.

Another interesting thing to note in FIGURE 9 is that transition does not necessarily have to be reciprocal. Whereas travellers from 8 CPU have access to 18 CPU since 18 is 8 CPU's harmonic sequence (that of the 2 Primary System), travellers from 18 CPU do NOT have access to 8 CPU because 8 is not in 18 CPU's harmonic sequence (that of the 3 Primary System).

An examination of the previous three figures reveal that Earths are popping in and out of transition all the time. Imagine all the Primary Systems diagrammed and one would see a very complex random sequence of relationships of Earths in transition to one another. To summarize transitional relationships, IF AN EARTH WITH A VIBRATION RATE WITHIN THE HARMONIC SEQUENCE OF ANOTHER EARTH TURNS UP IN ANOTHER PRIMARY SYSTEM, THAT WORLD IS A TRANSITIONAL EARTH FCR THE TIME THAT THE TWO EXIST AT THOSE VIBRATION RATES.

DIMENSION TRAVEL

Now that we have a fair picture of the nature of Harmonic, non—Harmonic, and Transitional Earths, let us focus on four problematic facets of Dimension Travel. They are:

1) How does one find a certain dimension after it has changed its vibration rate?
2) If one's home dimension diverges while one is away, which dimension is home?
3) If the dimension one is visiting diverges, what happens when one's two divergent selves seek the same home dimension?
4) If the dimension one is visiting diverges and passes out of transition, can one still remain in that dimension?

Before we begin our discussion, let us first catalog some of the methods of dimension travel:

1) Mental mastery of one's molecular structure like the Flash.
2) Mechanical vibration-converters such as the JLA's Transmatter Cube.

3) Innate teleportation powers like Lockjaw.

4) Magical teleportation like Doctor Fate.

5) Will power augmented by an energy device like Green Lantern's power ring.

6) Time machines set to go "sideways" like Doctor Doom's.[47]

All of these methods, tho dissimilar in description, are similar in effect. They all re-attune one's natural vibration rate to that of another dimension.

Next let us recap the conditions of dimensional accessibility. The dimension traveller has access to:

1) All worlds in his Primary System, i.e., Harmonic Earths.

2) Those worlds of other Primary Systems that are currently in transition, i.e., possessing a vibration rate within one's own harmonic sequence.

Armed with the knowledge of the means by which dimension travel may be implemented and which Earths are possible to visit, we can address the first of our dimension travel problems: the matter of finding a specific dimension more than once. If all dimensions remained at a fixed vibration rate, it would be a simple matter to find the same dimension again and again; one would simply have to attune one's vibrations to the rate that corresponded to that dimension once before and that would be it. In light of our awareness of the ever changing relationship of Reality Lines, however, this is no longer such a simple matter. If the dimension one seeks to visit has diverged, attuning one's self to its old vibration rate will not take one there.

So how does one find a specific dimension once it has diverged? The first consideration is that Divergent Factors are generally not so frequent that a great number of them will have occurred for a given Reality Line in the interval between visits.[48] Secondly, assuming that the dimension is still within one's harmonic sequence (i.e., has not passed out of transition if it was not in one's Primary System), one would only have to scout the nearby vibration rates in the harmonic sequence to find the whereabouts of the divergent dimension. The only real problem lies in the fact that there are now two dimensions that have an equally legitimate claim to being the dimension the traveller wishes to visit.[49]

To translate this situation into specifics, let us take Flash, who has done more dimension travelling than any other character in comics, as our typical traveller. Suppose he decides to visit a friend on "Earth-Two" whom he hasn't seen for a Year. He vibrates at the "Earth-Two" rate he remembers, finds it isn't there,[50] so increases his vibration rata into the higher multiples until he materializes in a dimension that appears to be "Earth-Two." After a short visit, he returns to his home Earth. The next day, the friend from "Earth-Two" drops in to visit,

complaining that he hasn't seen him in a year. "That's impossible," cries Flash, "I just dropped in on you yesterday." What has happened in this instance is that Flash has been paid a call by the friend from the other "Earth-Two "—the divergent Earth he did not visit the day before. This hypothetical situation could occur in accordance with our theory of divergence. The reason why it doesn't occur frequently is because just as there is more than one divergent "Earth-Two," there is more than one divergent "Earth-One."

As far as more "distant" parallel dimensions (i.e., those whose vibration rates are numerically distant from one's own) over greater intervals of time, all that can be said is that it certainly would not be an easy matter to return to a specific Reality Line. It would be reasonably simpler to return to one of a number of phenomenally-similar Reality Lines clumped in the same vicinity. In summary, travelling to another dimension isn't half the problem that finding it again would be.

Let us move on to the problem of finding one's way back home. Just as it may be difficult to locate a specific dimension more than once, it may be just as difficult to find one's home dimension after one has left it.

To begin with, we must examine the inherent dimensional properties of matter. Since all matter changes its vibration rate with each divergence, one would assume that matter has no particular preference for any given vibration rate, as long as re-attunement were a simple matter of actualizing one's natural overtones.

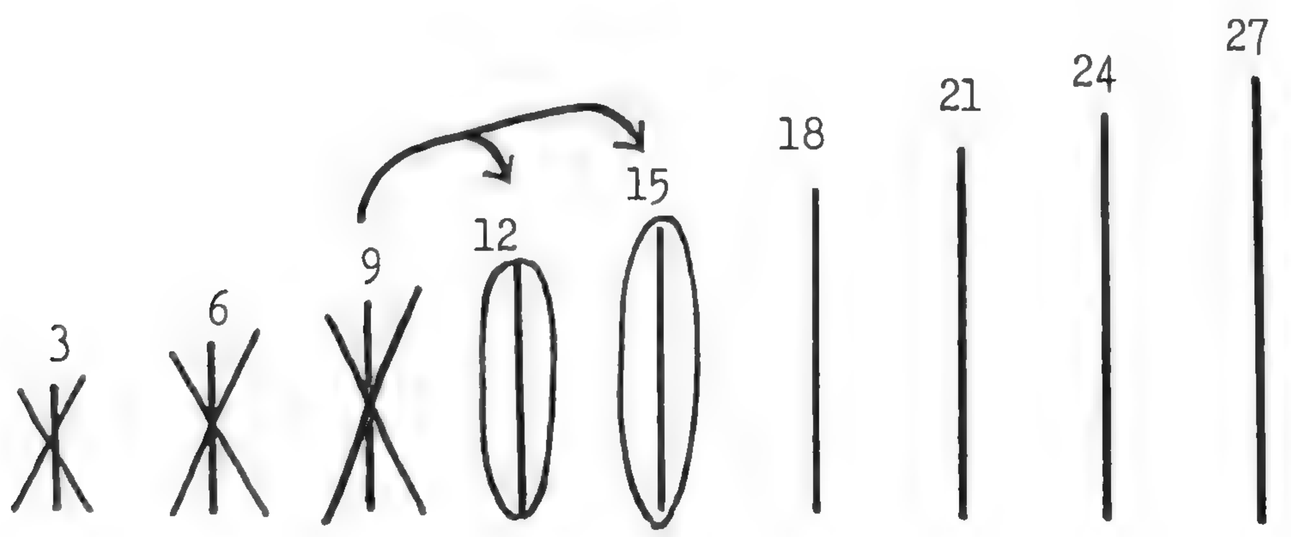


FIGURE 10

FIGURE 10 represents the overtones inherent in the vibration rate of matter in the 3 Primary System as a continuum of line segments of increasing length. When dimension diverges, matter "steps up" to the nearest harmonic overtone (provided that vibration rate has not already been assumed by another diverging Earth). In FIGURE 10, 9 CPU has stepped up to 12 and 15 CPU. 9 CPU and the others with an "X" thru them no longer correspond to any existant dimension. 18 CPU and above values

correspond to potential vibration rates worlds in the Primary System could actualize during future divergences. FIGURE 10 illustrates the natural re-attunement matter undergoes when a dimension diverges.

When one dimension travels, one is in effect "hopscotching" thru one's overtones. FIGURE 10 depicts all of the overtones within a whole Primary System.[51] Some of the values are already actualized (12 and 15). Altho one's home Earth can not attune to already actualized values with a divergence, it is a simple matter to travel to these worlds where one's overtones are actualized, i.e., Harmonic Earths.

So, if matter has no preference for any particular vibration rate, it follows that for dimension travel, WHEN MATTER IS ATTUNED TO A NEW VIBRATION RATE, IT WOULD SHOW NO TENDENCY TO REVERT TO ITS ORIGINAL RATE (thus slipping back into one's home world). We shall refer to this as the NON-HOMEOSTATIC PROPERTY.[52] Applying this property to the task of finding one's way back to one's home dimension, one would find that it is not the simple matter of allowing one's body to automatically resume its natural vibration rate. There is no one natural vibration rate, only a harmonic sequence of possible vibration rates. There is also no automatic mechanism to return one to one's "rightful" vibrational niche.

As we surmised on the previous page, the process of finding home is just as difficult as finding and specific dimension again—if it were to diverge in one's absence.[53] FIGURE 11 illustrates.

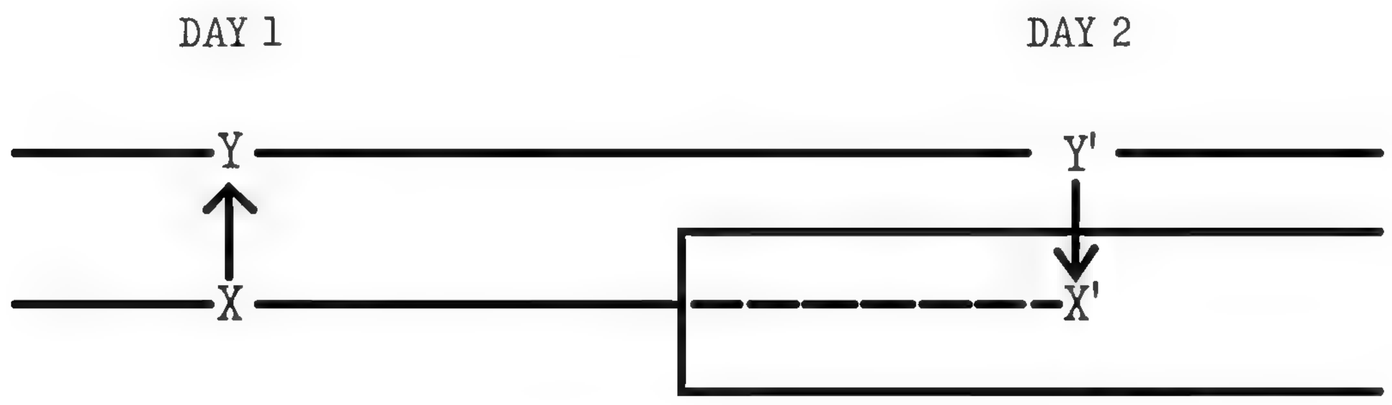


FIGURE 11

In FIGURE 11, a traveller leaves his home Earth (Point X) on Day 1, travels to another Earth (Point Y), stays until Day 2 (Point Y') and returns home (Point X') only to find that his Earth had diverged while he was gone and there was now no dimension to correspond to his original rate.

So what would happen to the traveller? Let us outline the possibilities: 1) The traveller would resume his original vibration rate (not automatically but because it was what he was "shooting" for), but since it corresponded to no existent dimension, he would remain intangible. 2) As soon as the traveller got in

the vicinity of his original vibration rate, he would be aware that there is no longer a dimension that rate corresponds to, so he would decide to assume one of the two new vibration rates his world now possesses. 3) As soon as the traveller attained his old vibration rate, he would diverge into two separate beings, one for each of the "successors" to his home world, as he would have if he had been on his world at the point of divergence.

Which of these possibilities would occur? Concerning the first possibility, while it is possible to maintain a vibration rate that no longer exists,[54] one would suspect that altho physical matter would show no tendency for any particular vibration rate in its harmonic sequence, it would certainly show a tendency towards a physical state rather than an immaterial one. Maintaining a vibration rate that no longer exists would probably be a harder process than finding one that did exist.

As for possibility two, where the traveller chooses which of the two existant worlds he will now consider home, this would 1) indicate that the traveller realizes that his dimension had altered its vibration rate, which has not been acknowledged in any story to date, and 2) open up the possibility that friends from the dimension which he chose not to go to would be aware of his absence and perhaps even endeavor to look for him. This, too, has not been shown.

Possibility three and its "automatic mechanism" that belatedly diverges a traveller who has missed his home world's divergence would certainly be a "deus ex machina" solution, but it cannot be justified. Just as a body has no inherent "automatic mechanism" that would return it to its original vibration rate, a body would also have no inherent mechanism that could detect it belonged to a dimension that diverged and assimilate him. A general rule of Reality would be that a traveller is subject to the Reality Line he is on and no other.

Thus, possibility two, where the only objections are that the solution has not yet been depicted, would be the most likely answer. The first objection could even be quelled if one hypothesized a system by which the traveller assumed one of the divergent Earths over another (e.g., the world whose vibration rate is CLOSER to the one he started out from). Conceivably the traveller could assume this closer world so fast that he would not be aware of the vibrational variance. Of Course, the second objection cannot be similarly dismissed. If one returns to but one of two home worlds, the other will forever be without one. Somewhere near "Earth-One," there may be an Earth almost exactly like it except Flash never returned from a dimensional hop.[55]

Let us now consider the opposite problem of having one's home dimension di-

verge without one: what if one diverges outside one's home dimension when the Reality Line one is on has done so? The problem quite graphically is that there are now two identical dimensional counterparts who are both returning to the same home dimension. Once again let's outline the possibilities: 1) Both would arrive on the home world and claim to be the real traveller while the other must be an imposter. 2) Both would arrive on the home world and merge into one since they are both trying to attain the same vibration rate. 3) The presence of the two doppelgangers at the same rate would cause an immediate divergence which would give both counterparts a different home world to return to.

Which possibility here seems most likely? We can rule out possibility two right away since the trend of Reality is towards a more complex state. By extension, Reality never simplifies itself. There is also documented evidence this does not occur: in Justice League #74, Superman of "Earth-One" shook hands with Superman of "Earth—Two" and they remained separate entities.[56] Possibility three can be ruled out by virtue that the mere meeting of dimensional counterparts is not enough to be a Divergent Factor.[57]

We are left with possibility one as the most likely. Once again, the objection to it is simply that it has not yet been shown. The two identical doppelgangers would arrive on the same home world[58] and there would be no way to determine which was the "true" and which was the "replica," for the both came into existence at the same instant, never to be one again. The occurrence would not be insurmountable: two beings of more than just similar minds, once accepting the situation as is, could work out some arrangement by which one would continue the "normal life" of the traveller, while the other would go on an extended vacation out of the sight of the other, perhaps even establishing a new identity and lifestyle.[59] The two could even trade off from time to time, and after filling the other in about current events, no one would be able to detect the switch. Somewhere near "Earth-One" there may be an Earth exactly like it except multiple Flashes live in secretive coexistence.

The last problem concerning dimension travel we will deal with is the transience of Transitional Earths. If a Harmonic Earth diverged while a traveller were visiting it, he would diverge right with it, as we just discussed. The traveller's body would have no more difficulty attuning to other overtones than to the one it has just been attuned to. But what if the traveller were on a Transitional Earth when it diverged, and one's harmonic sequence did not include one or both of the newly divergent world's vibration rates? In other words, what if one is on a Trans-

itional Earth when it passes out of transition? The possibilities are: 1) One would be unable to make the transition to the new vibration rate any would retain the former vibration rate, becoming intangible. 2) One would be unable to make the transition and would slip into the nearest Earth that was in one's harmonic sequence. 3) One would be unable to make the transition and would automatically return to one's home Earth. 4) One would be able to make the transition because one is subject to the Reality Line one is on, even if that Reality Line draws one away from one's original harmonic sequence.

Possibility one, with its intangibility effect, has no legitimate objections that can rule it out. Possibility two, slipping to a nearby accessible Earth, is equally valid. Possibility three can be eliminated by citing the Non-homeostatic Property. Possibility four supports the general rule that the traveller becomes a part of the reality he visits, and a divergence that pulled him out of his harmonic orientation would be possible as long as he was on the world AS it diverged. In this case, once the traveller left, his harmonic orientation would again take effect, making a return to that Earth now out of transition as difficult as travelling to any non-Harmonic Earth. None of the three possible explanations can be supported or refuted by evidence in our source, comic literature. The intangibility effect is probably the weakest of the three, since matter, as mentioned previously, does not prefer an immaterial state. By conjecture, the author prefers possibility four.

In summary, it is apparent that dimension travel is not as easy a matter as it is usually depicted in comics. Most dimension travel stories can be viewed as glossing over the sticky points of the matter. Our heroes are fortunate that they do not do more dimension travelling than they do, or the problems we have just outlined would be bound to show up some day.[60]

ANOMALIES

Let us now scrutinize the inter-dimensional phenomena: Times of Conjunction, Focal Points, and Nexuses.

Upon initial consideration, it is difficult to readily imagine what a Time of Conjunction could be referring to. Physical bodies occupying the same space (i.e., parallel Earths could not have perigees and apogees like planetary bodies separated in space. There would also be no time at which the vibration rates of two worlds are closer to one another on a cyclical basis. What then could this cosmic alignment refer to?

As for Focal Points and Nexuses, it is difficult to imagine what special properties a small area of space would have that the rest of the world would not. Focal Points and Nexuses would have to have the same vibration rate as the rest of the world or they would not exist on that world. Are Focal Points and Nexuses different names for the same phenomenon? The Focal Point that exists on the stage of a Central City auditorium is described in Flash #151 as a "gateway between the two Earths"—namely "Earth-One" and "Earth-Two."[61] A Nexus is described in Fantastic Four #162 as "a hole in time and space"[62] and in Man-Thing #1 as a "juncture point."[63] Whereas Flash still needs his super-speed vibrations to pass thru a Focal Point, a Nexus allows natural passage (re-attunement) between dimensions. A Nexus would appear to be a dimensional rift, a minor aberration in the fabric of reality.[64]

Could Times of Conjunction, Focal Points and Nexuses be related? Consider the possibility that the holes between specific dimensions periodically fluctuate in size.[65] In order to permit natural passage from one world to another, two holes must exist in equivalent geographic areas, one on each Earth. If the size-fluctuation cycles between the two holes were in opposition, i.e., one peaked in size while the other ebbed, there would be a zone of time midway thru each hole's cycle when the two holes' sizes would be congruent. When the dimensional apertures are not congruent enough to permit natural passage, the area would be a Focal Point, a spot where the fabric of reality was threadbare. The Focal Point would become a Nexus at the Time of Conjunction, i.e., when the size of the holes are congruent. With the advent of dimensional machines which create artificial Nexuses between worlds, the possibilities of these natural passageways are being ignored.[66]

FRACTIONAL DIMENSIONS

So far in our discussion, we have been dealing exclusively with parallel Earths—dimensions occupying the same space as Earth that resemble Earth in landform, type of intelligent life, natural laws, and permutations of history. We will now consider non—Earthlike dimensions: those with natural laws based on magic rather than science,[67] those where Earth legends are real, and those where intelligent life did not evolve to look like humanity.[68]

Where on our diagram of Reality Lines might these dimensions fit in? Justice League #30 first describes "vibrational barrier lands" as between parallel Earths, but having their own unique planes of reality. If parallel Earths have been assigned whole number vibration rates in our system, the dimensions in between

them could have non-whole number vibration rates. We will postulate: THERE COULD EXIST A DIFFERENT PARALLEL DIMENSION WITH ITS OWN PLANE OF REALITY TO CORRESPOND TO EVERY NON-WHOLE NUMBER.

However, before we can incorporate the fractional dimensions onto our diagram of Reality Lines, we must figure out one thing: how are they diagrammed? Unlike with whole numbers, where we plotted in the prime numbers and branched the harmonic multiples out from them, there is no such thing as prime fractions. So how do we decide which fractions correspond to the root worlds from which harmonic systems stem?

The problem becomes even more complex than that. Once we decide which shall be our root fractions, by what system will we have them diverge into harmonics? For example, suppose 2.5 CPU were the root of a fractional system. What would be the vibration rates of its first two divergent worlds? Whole number multiples will give us a whole number vibration rate at the first multiple (5), and 5 is the Prime Earth of a whole-numbered system, not a harmonic of a fractional dimension. If the harmonic sequence were fractional multiples, what would those fractional multiples be?

It is far easier to surmise that fractional dimensions exist between whole dimensions than it is to fathom the system by which they would diverge. Why is this? Whereas whole numbers are infinite, fractional numbers are TRANSFINITE, i.e., greater than infinite. How do we know there are more fractions than whole numbers? In order to prove there is an equal number of members in any two sets, a one-to-one correspondence between members of each set must be produced. In the case of the set of whole numbers to the set of fractions, this correspondence cannot be established. While there is a method by which one may list ALL the whole numbers without missing any (1, 2, 3...∞), there is no possible system by which to list ALL the fractions without missing any. There is no such thing as the next closest fraction (called the INFINITESIMAL) when each fraction could have an infinite set of terms.[69]

Thus, because fractional numbers are a) transfinite, b) lacking in a system by which they may be ordered, and c) capable of generating whole numbers as multiples, we cannot use the same system for diagramming the divergences of fractional dimensions as with whole-number ones.

In setting up any system to describe satisfactorily the relationship of fractional dimensions to whole-number dimensions, and among the fractional dimensions themselves, we will have to be much more arbitrary than before. Hence we will die-

cuss several possible systems and decide which is best integrated into our conception of the Omniverse.

Even before we can construct any system of fractional dimensions, we are going to have to consider something that will enter into any fractional system. With whole number vibration rates, we presupposed that changing one's vibration rate by even one CPU would take one to another dimension.[70] Now we are supposing that fractional differences in CPU will do the same. The question becomes: What is the smallest amount of vibrational variance that will result in a different dimension? We shall refer to this variance as the INFINITESIMAL VIBRATION RATE.

The Infinitesimal Vibration Rate will be the limiting factor in any system of fractions on how far we can sub-divide whole number vibration rates. In effect, it turns the number of fractional dimensions possible from a transfinite to an infinite number.

Let us now consider three possible systems of fractional dimensions:

THE PRIME DENOMINATOR SYSTEM. In this system, the denominators of common fractions which are prime numbers would be the root worlds of the fractional Primary Systems. The harmonic multiples would be given in the numerator, and any whole number generated would be automatically disregarded, in the same manner as in the whole number system when a given rate in a harmonic sequence has already been actualized. FIGURE 12 illustrates the Prime Denominator System.

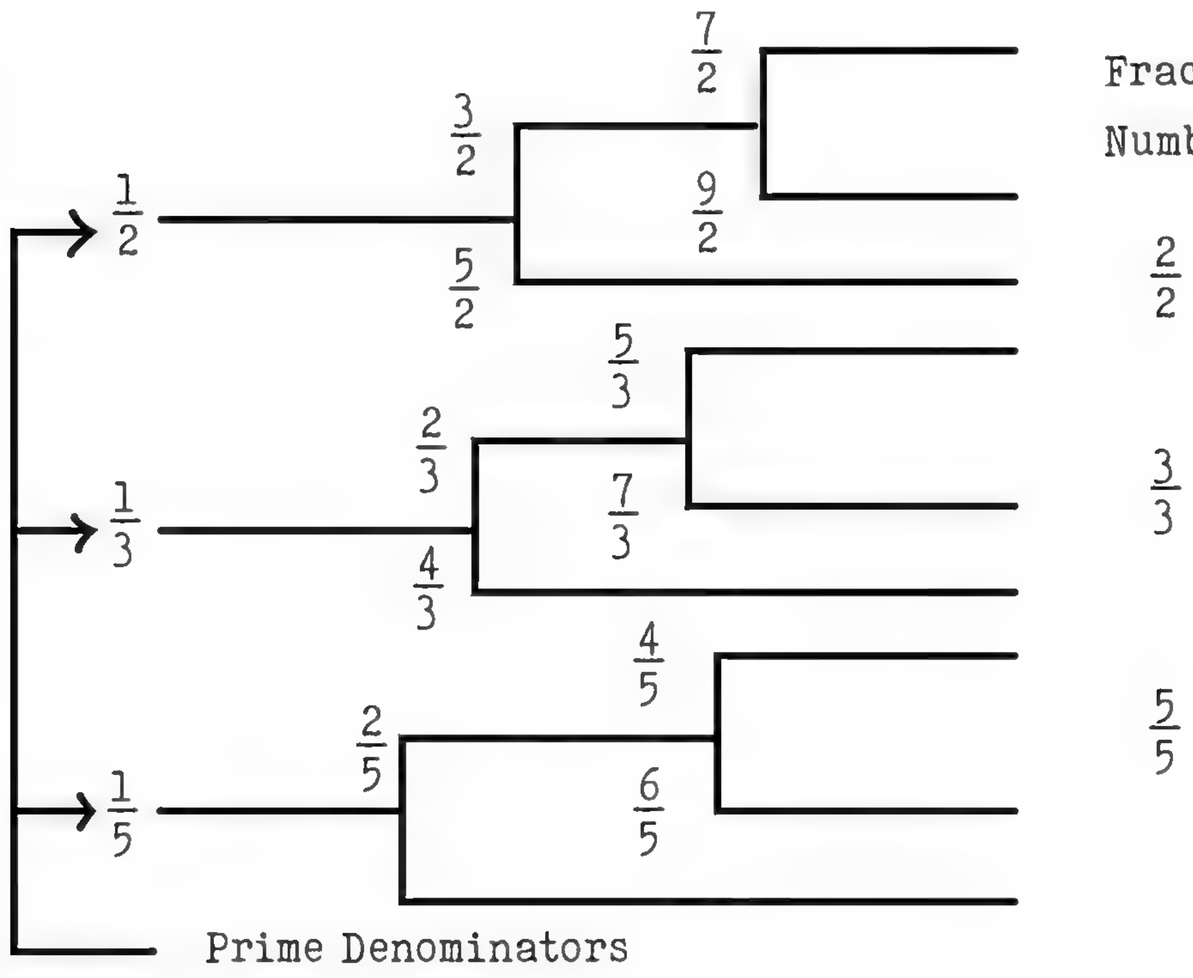


FIGURE 12

The major drawback with the Prime Denominator System is that the Infinitesimal Vibration Rate will cut in, curtailing the number of prime denominator root worlds that can be established. If we say that any vibrational difference less than $^1/_{47}$, for example, is insufficient to support its own Reality Line, there are only fifteen prime denominator fractions between $^1/_2$ and $^1/_{47}$. This would be an extremely limited number of Primary Systems as compared with the infinite number of Primary Systems for whole numbers.

THE PRIME DECIMAL SYSTEM. In this system, the entire set of prime numbers is expressed as decimal fractions, which is equivalent to reducing the entire set to a tenth. Once again, any whole numbers generated would be automatically disregarded. FIGURE 13 illustrates the Prime Decimal System.

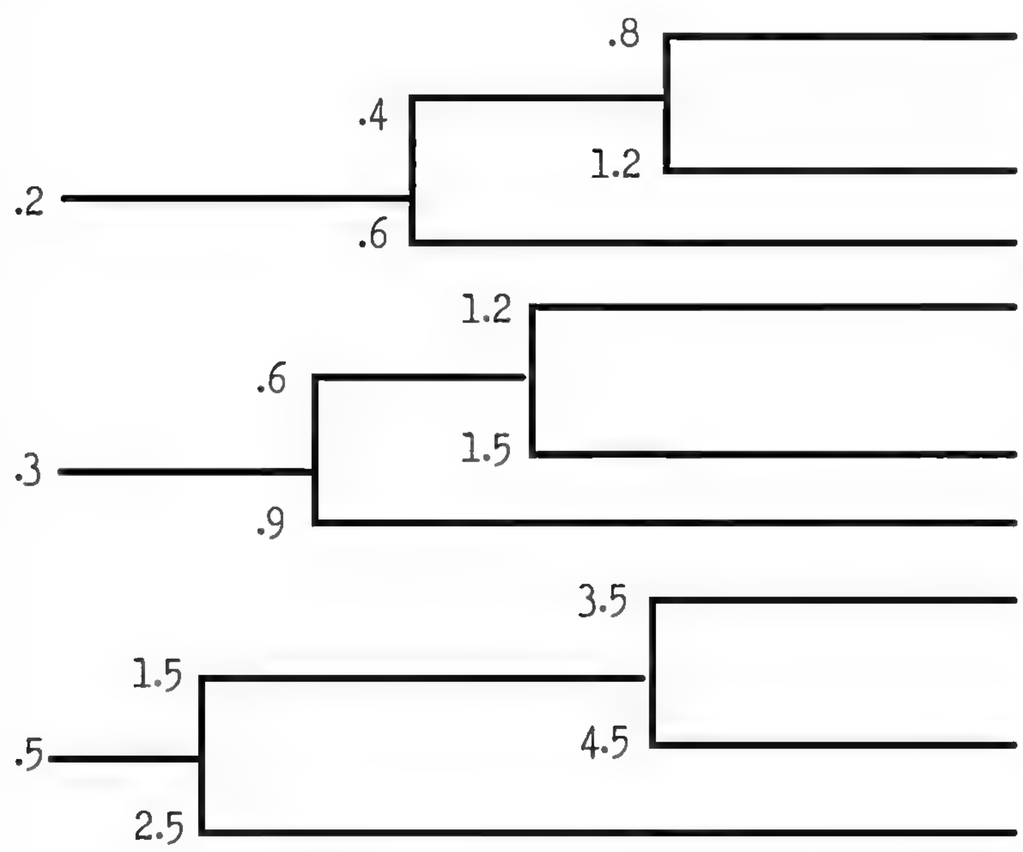
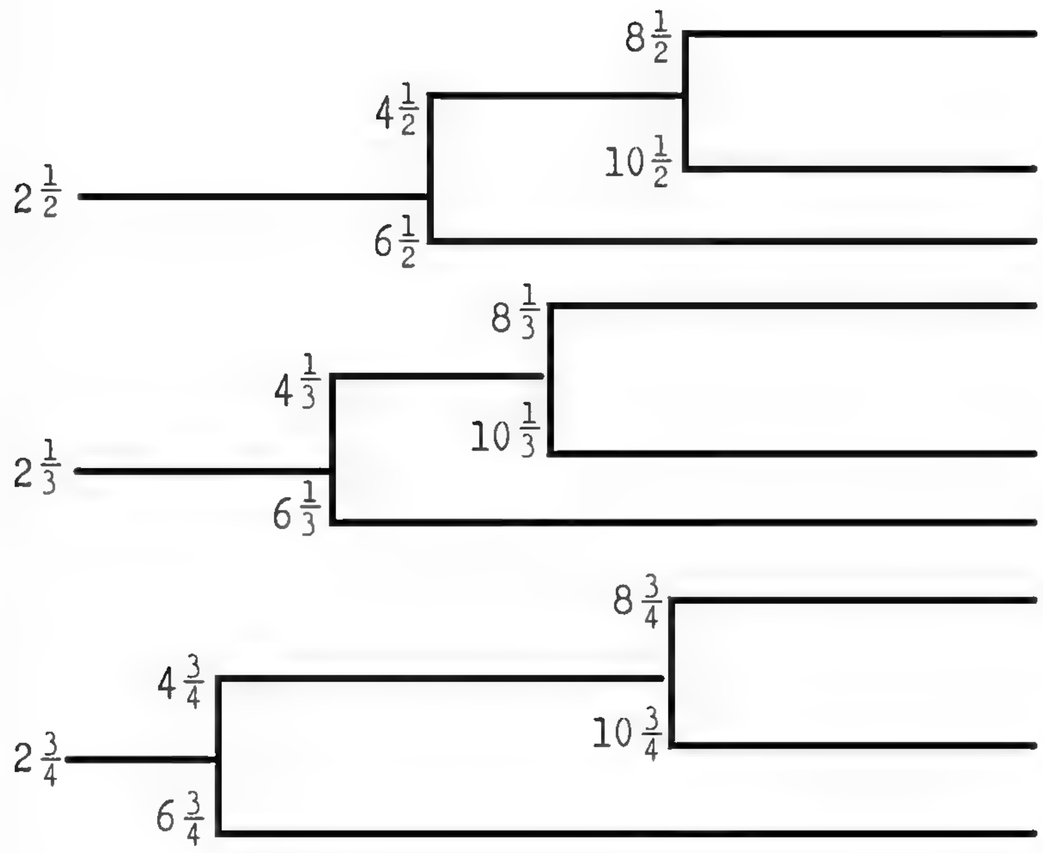


FIGURE 13

This system automatically sets the Infinitesimal Vibration Rate at .2 CPU. There are no fractional dimensions with a smaller vibrational difference than that. The previous system, the Prime Denominator System, had no built-in Infinitesimal, one had to be established arbitrarily. The one drawback with the Prime Decimal System is that in a base ten system certain common fractions, notably $^1/_3$, will not be generated.

THE SATELLITE SYSTEM. In this system, the fractional dimensions constantly remain at fixed vibrational differences from the Primary Systems. Altho Reality would diverge independent of whole number influence, the general pattern would be that the fractional dimensions tag near the whole number dimensions as they ascend thru their harmonic sequences. FIGURE 14 illustrates the Satellite System.



NOTE: This diagram depicts three sample satellites of the 2 Primary System. The fraction remains constant while the pattern of divergences follows the whole-number harmonic sequence.

FIGURE 14

The major drawback with the Satellite System is once again there is no built-in Infinitesimal. Thus the number of fractional satellites from any prime whole number has to be arbitrarily established. FIGURE 14 only depicted three sample satellites for one Primary System (2 CPU). The number of satellites would be determined by setting the Infinitesimal. If we chose the same Infinitesimal as in the previous system (the Prime Decimal System), which was .2 (or $^1/_5$ in its common fractional equivalent), there would be nine satellites stemming from each Primary System: $^1/_5$, $^2/_5$, $^3/_5$, $^4/_5$, $^1/_4$, $^3/_4$, $^1/_3$, $^2/_3$, and $^1/_2$.

In comparing the three systems, we can readily dismiss the Prime Denominator System as the weakest since the number of fractional Primary Systems are so severely limited. There is also no apparent means by which the harmonic sequences of each prime denominator could ever be in transition. Each harmonic sequence has unique members, which means no transitional relationships (permitting travel outside one's Primary System) are possible. The Prime Denominator System also gives no indication as to which whole number dimensions would be accessible to which fractions. The Prime Denominator System can be summarily rejected.

The fractional dimensions of the Prime Decimal System do have transitional relationships (i.e., the harmonic sequences of various prime decimals do contain common members) but because of the automatic discarding of all whole number equivalents, there would be less transitional relationships possible than with whole number dimensions. For example, while worlds in the 2 and 5 Primary Systems would be in transition at 10, 20, 30...CPU, the .2 and .5 fractional Primary Systems would never be in transition for 1.0, 2.0, 3.0...CPU vibration rates are discarded.

As for its relationship to whole number Primary Systems, like that of the Prime Denominator System, the Prime Decimal System has no fixed relationship to the whole number harmonics. The Prime Decimal System also has the disadvantage of being unable to generate certain common fractions. Its major advantage is its built-in Infinitesimal.

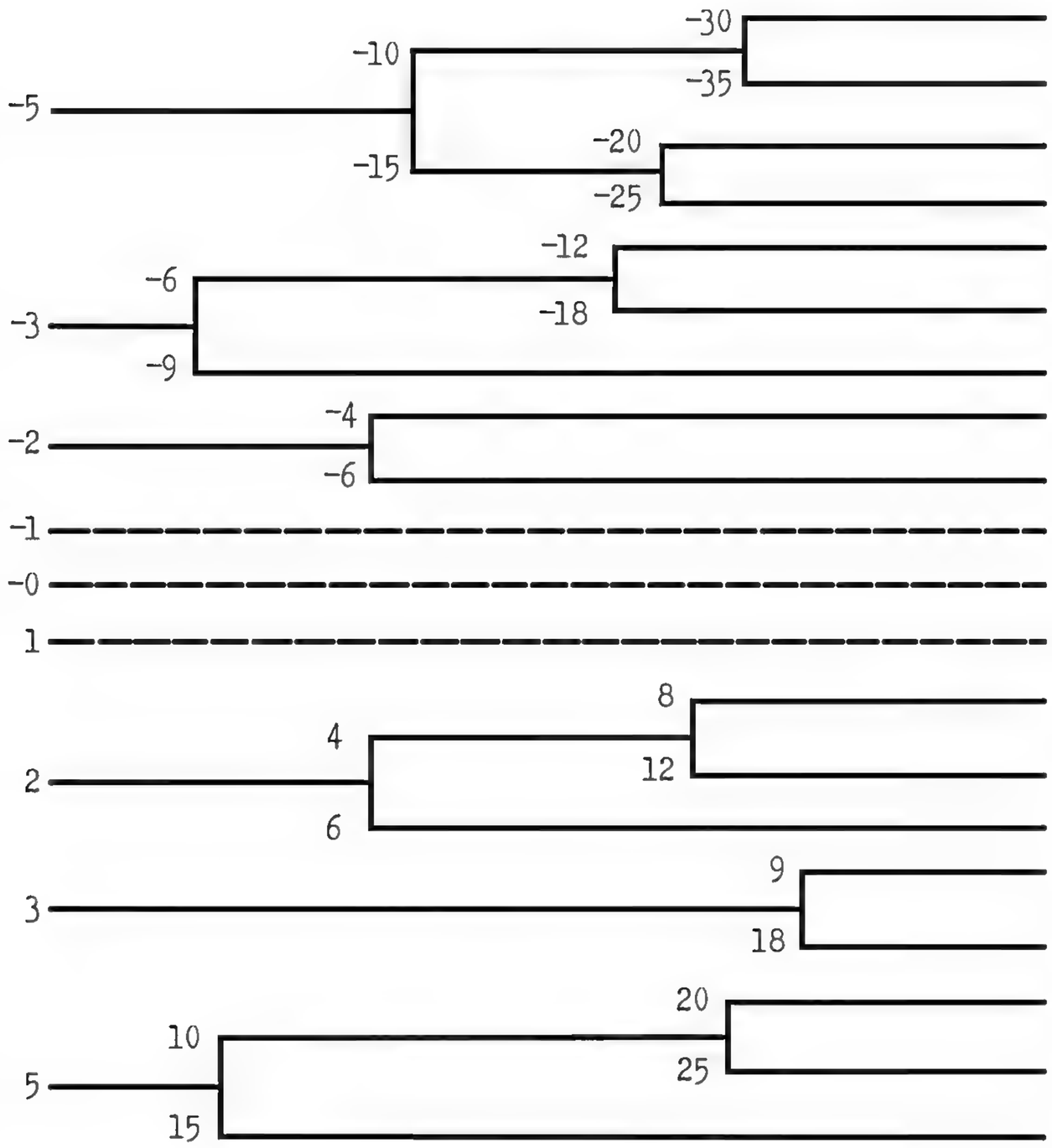
The Satellite System has two main assets the others do not. First, the fractional dimensions have the possibility of as many transitional relationships with other fractional dimensions as do the whole number dimensions among their like kind. For example, just as the 2 and 5 Primary Systems can be in transition at 10, 20, 30...CPU, the $2^1/_3$ and $5^1/_3$ systems can be in transition at $10^1/_3$, $20^1/_3$, $30^1/_3$... CPU or the $2^4/_5$ and $5^4/_5$ systems at $10^4/_5$, $20^4/_5$, $30^4/_5$...CPU.[71] Second, the Satellite System has a fixed relationship to the whole number harmonics, which best accounts for some documented observations. These observations are that the same fractional dimensions always seem to be accessible to the same whole number Earth even after that Earth has diverged. If the fractional dimensions followed a completely independent harmonic sequence, the fractional dimensions nearest a whole number Primary System would constantly be changing.[72] The one disadvantage of the Satellite System is that the Infinitesimal must be arbitrarily decided. But because the assets of this system so outweigh the liabilities, the author feels the Satellite System is the best model of fractional divergences to incorporate into the unified continuum conception of the Omniverse.

As to whether there would be any mathematical basis determining if a fractional dimension is "mythological," "magical," or "alien," by nature, there is insufficient evidence to speculate.[73] These descriptions are, after all, being assigned by Parallel Earthlings to distinguish between similar (parallel Earth) and dissimilar dimensions, and may only be meaningful from that reference. Astute readers may have noticed the parallel Earth bias present in oar discussion of dimensions by assigning Earthlike dimensions whole numbers and non-Earthlike dimensions less than whole numbers. It may just as easily be argued that parallel Earths are the fractional dimensions, not the others. But since we have a greater knowledge of parallel Earths, and since our schemata of the Omniverse is but a mathematical construct, we are not unjustified in making the assumptions we did in devising our model.

ANTI-MATTER DIMENSIONS

Diagramming the Reality Lines of the anti-matter dimensions does not pose as great a problem as the fractional dimensions did. The same system we used for

positive whole number vibration rates will apply just as neatly to negative whole numbers vibration rates. We shall postulate that just as there may be a distinct dimension to correspond to every positive whole number, the same would be true for negative whole number vibration rates. FIGURE 15 illustrates the relationship of the negative (anti-matter) dimensions to the positive (matter) dimensions.



NOTE: The vibration rates -1, 0 and 1 CPU are indicated by a dotted line to designate that no Reality Lines exist at these rates.[74]

FIGURE 15

Altho there is no interdependence between numerically-matched positive and negative Primary Systems (such as 3 and -3), one would surmise that dimensional travel would most easily be facilitated between such systems. The other negative Primary Systems would possess the same transitional relationships to the positive Primary Systems as the positive do among their kind. In other words, the harmonic sequence a given world belongs to would determine both which positive end negative dimensions are in transition.

One would presuppose the existence of fractional anti-matter dimensions, but since we have no observational data to affirm their existence, we will leave the matter undiscussed.

PHENOMENAL RELATIONSHIPS

In the preceding pages of this section we have devised a means to diagram Reality Lines in order to show their mathematical relationship to one another. Each of the points that made up a Reality Line were Atomic Instants, representing all the phenomenal data that contributes to the reality of an instant boiled down to a single symbol of information. Up to now we have been demonstrating the mathematical relationships among dimensions, but we have yet to address ourselves to their phenomenal relationships.

Looking at the way dimensions diverge on any one of our diagrams, one can see that after a divergence, the parallel Reality Lines shall never again have points in common. Translated into phenomenal terms, there will never be an instant where the Reality of two separate dimensions will be precisely the same again. And as random differences accumulate, the phenomenal dissimilarity between once integrated dimensions becomes greater. Hence we can postulate AFTER A DIMENSION DIVERGES, THE TWO DIVERGENT WORLDS NO LONGER HAVE A PHENOMENAL DEPENDENCE ON ONE ANOTHER.

So what would be the phenomenal relationships between dimensions? None, once they diverge. Common sense tells one that the more recently a dimension has diverged, the more similarities between them, since the dissimilarities have not yet had much time to accumulate. But this has to do with events of the past, which of course would be the same for two worlds that once were one, and not events of the present/future over which there are no natural influences.

Thru dimension travel, it is possible to purposely cause Reality to imitate that of another dimension.[75] It is also possible that there are natural anomalies in the dimensional structure (along the order of Focal Points and Nexuses) which account for coincidences between phenomenally-independent Reality Lines.[76] But there is no intrinsic pattern of relationships among independent Reality Lines.

Since we have been using Marvel and DC comics as our source, it would be appropriate to discuss the relationships among their various Earths. First, it is more than probable that the Marvel Earths and DC Earths are a part of different Primary Systems. Even if they were a part of the same Primary System, one would have to place the Divergent Factor that occurred between them in the pre-historic past since "Marvel Earth" had a Hyborian Age (first depicted in Conan #1) and an Atlantean Age aven before that (Kull #1). "Earth-One" had no such pre-historical

epochs.[77] With reality having diverged so long ago, the present day realities of these worlds have no phenomenal bearing on one another, other than isolated occurrences.

Let us now consider the divergences between the Earths of the Primary Systems depicted in DC comics. In order to have seemingly-identical counterparts such as Diana Prince, Bruce Wayne and Clark Kent, "Earth-One" and "Earth-Two" must have diverged in relatively recent times, within the last two generations.[78] What might have been the Divergent factor that separated "Earth-One" and "Two"? The author contends that lt may have been the landing of the alien child who grew up to be Superman. Whereas the date of Krypton's annihilation may be fixed, the date that the infant Kal-el arrived on Earth is not. Kal-el's Landing on Earth in the 1920's may have been the first occurrence in the chronology of the Reality Lines we label as "Earth-Two." Kal-el's landing on Earth in the 1940's may have been the first occurrence in the chronology of the Reality Lines we label "Earth-One." There are Earths Kal-el never landed on at all (or at least not yet[79]). One such Earth is "Earth-X" of the Freedom Fighters, where the Nazis won World War II.

The relationship between the Earths depicted by Marvel are somewhat more difficult to ascertain. The reason for this is that in the effort to maintain a tidy universe, too much has been assigned to correspond to the Reality Lines that chart the mainstream "Marvel-Earth's" chronology. Specifically, Kid Colt and the Western heroes of the 1870's, Doc Savage of the 1920's, the Invaders of the 1940's, the Fantastic Four of the 1960's, Killraven of the 2010's, and the Guardians of the 3000's are all said to represent the chronology of ONE mainstream Marvel Earth. Yet the inclusion of one of these time eras as a possible outgrowth of the others presents certain implausibilities. This time era is the 2010's world of Killraven.

In Defenders #26, writer Steve Gerber stitched a single thread thru the future alternative worlds of Killraven (appearing in Amazing Adventures) and the Guardians (who subsequently appeared in their own strip in Marvel Presents). The premise to Killraven's time era is that the Martians have declared the second War of the Worlds, the first having taken place in 1900. The question is whether the Martian invasion of 1900 actually occurred in the past of Doc Savage/Invadere/Fantastic Pour, i.e., whether these 20's/40's/60' worlds would have evolved as depicted with a Martian invasion in their pasts. Would the world have forgotten the alien menace by the Prohibition era of Doc Savage? Would Hitler have made his bid for world domination remembering the Martian invasion in his youth? Would the

plethora of 60's heroes, some of them veterans of the Kree-Skrull War,[80] not have thought to stem any possible conflicts by at least keeping an eye on their Martian neighbors? Would the existence of an alien race on Mars not have been acknowledged in tho hundred years between their first and second invasion?

The author contends that the 1900 War of the Worlds is NOT in mainstream "Marvel-Earth's" past, hence the 2000 War of the Worlds is not in one of its possible alternate futures. However, the issue gets more complicated. The Guardians of the Galaxy definitely are in one of "Marvel-Earth's" futures, for Vance Astro of the Guardians comes from "Marvel-Earth" circa 1970 (as revealed in Giant-Size Defenders #5); and the Badoon invasion of the 3000's is the second Earth conquest of the Badoon, the first having occurred secretly on "Marvel-Earth" in the 1960's (as accounted in Silver Surfer #2). Hence we have a chronology with inherent contradictions when applied to a single Earth's Reality Lines.[81]

As for the Divergent Factor that instigated the 60's Superheroic Age on "Marvel Earth," it would undoubtedly be the spaceflight that caused the Fantastic Four. The alternate world of Fantastic Four #118 diverged at the same time, when Reed Richards and Ben Grimm went up alone.

There are so many variables that could have caused divergences among the DC and Marvel Primary Systems that it would be the task of a computer to sort thru them all. Even if one would limit which variables one would chart, e go, all the Divergent Factors resulting from the Watcher's intervention, one would have quite a job. The charts on the inside front and back cover are the author's attempt to identify some of the major Divergent Factors that have resulted in the complex states of reality for the Reality Lines in DC and Marvel comics. Readers are invited to flesh out the bare outlines to the extent of their diligence. The charts offer one possible pattern for each comic group's worlds, and in some cases, assumptions had to be made to make up for lack of concrete data.

The charts should serve to illustrate one major point: the appelations for Earths are quite inappropriate for identifying one specific Reality Line. As can readily be seen, the events that make up the reality of "Earth-One," for example, wind thru many individual Reality Line segments. A less misleading terminology would be to speak in terms of branches of dimensions with common characteristics. If one would assemble a truly complete diagram of Divergent Factors for either of the Marvel or DC systems, one would find that a new Reality Line could have been created at the conclusion of each adventure where the fate of the Earth hung in the balance. For some magazines, this would be every issue.[82]

CASE STUDIES

In light of our expanded awareness of the relationships between dimensions, let us examine some specific stories.

In Justice League #46-47 and in Justice League #82-83, "Earth-One" and "Earth-Two" face similar destruction as mechanical devices put the vibratory worlds on a collision course. In the earlier tale ("Crisis Between Earth-One and Earth-Two," by Gardner Fox), an experimental space-warp machine causes the Barths to "hurtle towards one another,"[83] In the latter tale ("Peril of the Paired Planets," by Denny O'Neil), an alien contractor named Creator-2 plans to annihilate the Earths in order to harness the energy it will release. To do so, Creator-2 placed a "harmonizer" device in the Red Tornado's head to cause the android to vibrate at two different rates. Why Creator-2 suspected this would bring the two worlds together rather than causing the Red Tornado to simultaneously co-exist in the two dimensions to which he was attuned is perplexing. More probable is that the harmonizer was actually altering the vibration rates of the two dimensions.[84]

It is curious in the afore-mentioned adventure how the vibratory Earths are depicted as separate planetary objects on a collision course when actually they occupy the same space. Both the harmonizer and the space-warp machine were altering the vibration rates of the worlds, which would mean that the anticipated explosion in each case would be caused by the fact that two solid objects (such as the physically different Earths) cannot exist in the same space at the same vibration rate. Altho the pictorial representation of the two Earths about to collide was symbolic, in both stories the Spectre attempted to keep the Earths separate by wedging his ectoplasmic body between them. How the ghost managed to wedge himself between two planets that occupy the same space is puzzling, but the Spectre is omnipotent.

Justice League #82 has one other oddity. The harmonizer has the side effect of causing the defeat of the "Earth-Two" heroes to sympathetically affect their "counterparts" on "Earth-One." The oddity is in who the matched pairs of counterparts are. While the pairing of the Supermen of both Earths is logical since they are the same Kal-el entity, the pairing of Dr. Mid-nite and Batman, and Flash (Barry Allen) and Flash (Jay Garrick) is not. The latter two sets of heroes are NOT dimensional counterparts of the same entity, [85] only similarly-powered pairs of heroes. Apparently the harmonizer did not automatically link true dimensional counterparts, but rather pre-programmed pairs of heroes.

In Flash #179 ("The Flash-Fact or Fiction," by Cary Bates) Flash materializes on "Earth-Prime" and is unable to vibrate out of it without the aid of his Cosmic Treadmill to augment his super-speed vibrations. Way should "Earth-Prime" be any more difficult to vibrate from than any other Earth? Altho it is possible that "Earth-Prime" is non-Harmonic to "Earth-One,"[86] the answer more likely lies in Flash himself. Flash was knocked into "Earth-Prime" by an alien creature whom he later learned was feeding on his "aura radiation." A reasonable guess is that the loss of some of his "aura radiation" also affected his mastery of his molecular structure, making vibrating from that dimension more difficult.

In Fear #19 ("The Enchanter's Apprentice") and Man-Thing #1 ("Battle for the Palace of the Gods," both of Steve Gerber), a supernatural being called the Nether-Spawn has organized a Congress of Realities, a motley band of warriors from many dimensions brought together by the common aspiration for godhood. In the mythological dimension of Therea, they have tipped over the giant arrow called the Cosmic Axis, which has riddled the cosmos with Nexuses, causing denizens of many dimensions to materialize helter-skelter in other dimensions. After the Nether-Spawn is defeated by the Man-Thing, the artificial Nexuses are apparently closed by setting the Cosmic Axis upright. The Cosmic Axis need not be construed as some sort of pivotal focus of the Omniverse, but rather as some sort of mystical space-warping device.

In Green Lantern #52 ("Our Mastermind the Car" by John Broome), the renegade Green Lantern Sinestro steals the Power Battery of the Guardians and takes it to "Earth-Two" which he describes as "another universe over which you Guardians have no power."[87] This statement cannot be regarded as evidence that there are no Guardians in the universe that "Earth-Two" is in, since Sinestro does say "YOU Guardians" rather than "ANY Guardians." The universe is sufficently vast that the Guardians in the "Earth-Two" universe altho they've yet to be documented, is that "Earth-One" and "Two" are such close counterparts in a Primary System that it would be impossible to have such universal differences in reality and still be as alike.[88]

In Flash #151 ("Invader from the Dark Dimension" by Gardner Fox), the villainous Shade discovers a "dark dimension" between "Earth-One" and "Earth-Two" from which he can peer into both worlds. Obviously this is not a parallel Earth but a terrible forces of darkness present,[90] which may be taken to mean magic. Whether an alien or magical dimension, it is obvious that it has properties which permit

interdimensional vision.

In Captain America #150 ('Mirror, Mirror" by Gerry Conway) Jakar, a dimensional counterpart to tho otherworldly Stranger, intends to steal the souls of some Earth children to reanimate his inert people. This story is the first appearance of any dimensional counterpart to a non-Earthbound character.

In Justice League #103 ("A Stranger Walks Among Us," by Len Wein) there is a parade on "Earth-One" where various celebrants are clad as Marvel characters, establishing that there are Marvel Comics on "Earth-One." There also begins a coincidental sequence of events that apparently link it to Thor #207 ("Firesword," by Gerry Conway) and Amazing Adventures #16 ("The Juggernaut Will Get You If You Don't Watch Out," by Steve Engelhart) including joint participation by the authors in all three tales. How does one account for the similarity of events on "Marvel-Earth," "Earth-One" and "Earth-Prime" (if this be the dimension the participating writers came from)? The likeliest guess would be that due to the supernatural forces invoked, there were weird ripples of reality among dimensions which were in transition at the time. This is easier to swallow than thinking the JLA, Thor, Beast, and the writers were teleported to some common world for this one story.

In the much touted Superman Vs. The Amazing Spider-Man (by Gerry Conway), the obvious fact that Superman and Spider-Man live on different Earths is completely ignored.[91] In order to explain this gross discrepancy, one must surmise that since neither hero was shocked that the other was more than something out of a comic book, the story must have occurred on an altogether different parallel Earth in which there is both a Superman and a Spider-Man. It's either that or the writer left out some information on now one of the characters and their supporting troupe accidently showed up on one or the other's mainstream Earth.[92]

In Man-Thing #22 ("Pop Goes the Cosmos," by Steve Gerber), the writer relates how he got involved in chronicling the saga of the Man-Thing at the request of Dakimh the Enchanter. From the dimensional standpoint, this is a rather confusing tale since one is never certain which Earth Gerber is on. The most reasonable guess would be that Gerber is on "Earth-Prime" writing about "Marvel-Earth." How then is Gerber drawn into the events of the story itself when he is delivered a Nightmare Box? In Gerber's words, Thog, the Nether-Spawn who constructed the box, "would have to tap many worlds" for the emotional energy the Nightmare Box collected.[93] Obviously Gerber meant dimensional worlds as opposed to planetary worlds, and Gerber on "Earth-Prime" was thus implicated. The carrier of the Nightmare Box to Gerber is clad appropriately for a dimension in which no real superheroes exist.

In Fantastic Four #160-163, writer Roy Thomas depicts an interdimensional war between "Marvel-Earth," the barbaric world of Arkon (introduced in Avengers #75), the "Alternative Earth," from Fantastic Four #118, and the "Fifth Dimension" from Strange Tales #103. The conclusion of the justifiably intricate four-part story involves destroying (plugging up?) the Nexus between worlds thru which Arkon plans to siphon nuclear energy. This story portrays pre-meditated perturbations of reality as well as having more parallel dimensions in one tale than any other in the history of comics.

In Flash #209 ("Beyond the Speed of Life," by Cary Bates) a dimension of ectoplasmic matter is said to exist beyond the speed (vibration rate?) that living beings can exist. It is described as being at the rim of the universe, which perhaps means it is outside the boundaries of the universe proper. But even taking hyperlight speeds into consideration, the prospect of Flash making it that far out seems even beyond Flash's mettle. More likely is the idea that his ectoplasmic dimension is just some fractional dimension in which our physical laws do not apply.

In Planet of the Apes #11, an article entitled "Outlines of Tomorrow: A Chronology of the Planet of the Apes," by Jim Whitmore, attempts to explain the discrepencies(sic) in dates and details in the Apes cycle of movies/TV/comics. He offers the multiple Reality Line possibility as one answer, which is itself spoken of in the movie Escape from the Planet of the Apes and seems to be the underlying concern in the movies Conquest and Battle: to prevent a future from coming about.

In Avengers #141, 144, 147-149 (by Steve Engelhart) the Avengers have a return match with the Squadron Supreme from "Other-Earth." In #147 ("Crisis on Other-Earth",) President Rockefeller is depicted as being under the influence of the Serpent Crown, a "manifestation of a single serpentine nether-mind, older than antiquity"[94] which links the minds of all the wearers on the different dimensions. All the present day Earths where the crown exists stemmed from a single Earth which in ancient times was inhabited by the nameless serpentine entity.

Phillip Jose Farmer's "biographies," Tarzan Alive and Doc Savage: His Apocayptic Life, establish Tarzan and Doc as having common ancestry (necessitating that they hail from the same Earth) along with a whole slew of pulp characters such as Solomon Kane, The Avenger, Fu Manchu and the Shadow. Yet, in comic form, Fu Manchu, Doc Savage, and Solomon Kane appear on "Marvel-Earth, " while Tarzan, the Avenger and the Shadow are on DC worlds. Obviously the ones depleted in comics are dimensional counterparts to the ones in the pulps.

TIME TRAVEL

So far in our discussion of the dimensional structure of the Omniverse, we have been dealing with travelling from one Atomic Instant on a Reality Line to an adjacent Atomic Instant on another Reality Line. Since the Atomic Instants are adjacent, and one does not gain or lose any time by sliding from one to the next, dimension travel might be thought of as travelling "crossways in time."[95] Now we will consider travelling forward and backward in time and see how our unfolding knowledge of the Omniverse casts a new light on Time Travel.

KNOWNS

Let us begin with our Knowns, the attributes and oddities of time and time travel, as described in our source, comic literature:

1 There are three methods by which the "Time Barrier" (i.e., the force that holds phenomena in their rightful chronological niche) may be broken:

A Travelling faster than the speed of light. According to Einstein, time slows down in moving systems, and if one could travel faster than light itself, time would reverse itself. Superman and Silver Surfer have achieved time travel in this method, employing their own powers. Both characters have also gone into the future by this means, altho Einstein's theory has nothing to say about how this would be possible. Superman is depicted as spinning clockwise to travel into the future, and counterclockwise to travel into the past.

B Travelling by means of a machine. Various characters have invented or utilized machines that can send them forward or backward thru time. The Flash employs a Cosmic Treadmill which he energizes with his own super speed vibrations to time travel. The Atom jumps into a Time Pool an artificial vortex that has rent the fabric of time in & small area. Doctor Doom has invented a machine that consists of a platform that displaces in time anything on it. The Legion of Superheroes of the 30th Century have a Time Bubble. All these methods of travel, with the exception of the last, are similar in that the time machine remains in its present while dispatching travellers thru time.

C Will power and magic. Green Lantern and Dr. Strange are able to traverse the past and future by means of thinking themselves to the time

they wish to be in. Dr. Strange uses magical spells and Green Lantern uses his will-activated power ring.[96]

2 Despite the means of travel, the time traveller seems to be able to achieve a remarkable degree of control over his time-destination.

3 There is more than one possible future for any given parallel Earth. For example, the 30th Century Metropolis in Superboy is not in the same future as the 30th Century Central City in The Flash, altho Superboy and Flash are from the same 20th Century Earth.[97]

4 One's method of time travel would seem to be the determining factor as to which future one arrives in. A given method has a tendency to be able to return to the same future-reality.[98]

5 There are conflicting accounts as to the nature and consequences of time travel in the past:

A The past cannot be changed. Despite the interference of a future being, the present still occurs as one remembers it.

B The past cannot be changed. A future-being is intangible in the past, unable to physically affect reality.[100]

C The past can be changed. The very presense of a being not native to a given time era is enough to alter reality.[101]

It would seem paradoxical to maintain that all three of the previous accounts were equally valid, yet we shall see that they are.

6 There are conflicting accounts to whether a person can co-exist with one's self at the same instant on the same Reality Line. The majority of stories acknowledge that co-existence is possible, but not all. Another possibility for non-co-existence is that the second self becomes intangible (or "unreal") in the presense of the first self.

7 There exists a Timeless World or Limbo outside the timestream, where time either does not exist or is suspended.

These are the major facets of the Time Travel phenomenon which we shall incorporate into our theory of the Omniverse.[103]

CHRONAL DISPLACEMENT INERTIA

Before we can discuss travelling thru time, we must make fundamental assumptions about Time itself. Let us describe Time as an energy matrix that a) gives structure to the Reality Lines by ordering the sequence of events, and b) gives

structure to the entire continuum of Reality Lines (the Omniverse) by holding them in place relative to one another. The Timestream is the natural flow of time down the Reality Lines.[104]

Let us make the analogy that for any method of time travel, breaking free of the force of time (the Timestream) is like breaking free of the force of gravity. Just as one must accelerate (generate inertia) to overcome gravity, one must accelerate (generate inertia) to overcome time. Let us call the escape velocity necessary to free one's self from the Timestream CHRONAL DISPLACEMENT INERTIA (abbreviated CDI). Just as there is not just one means to generate spatial inertia, there is not just one way to generate Chronal Displacement Inertia.[105] But the potential energy to generate inertia is free-floating in the universe, and one need only find a means to tap it—be it machine, faster than light velocity, or will-power.

All things on a given Reality Line are subject to the chronological flow of the Timestream which causes things to age. Even when dimensional travelling, (i.e., moving sideways from one Reality Line to another), one never LEAVES the Timestream, as illustrated in FIGURE 16.

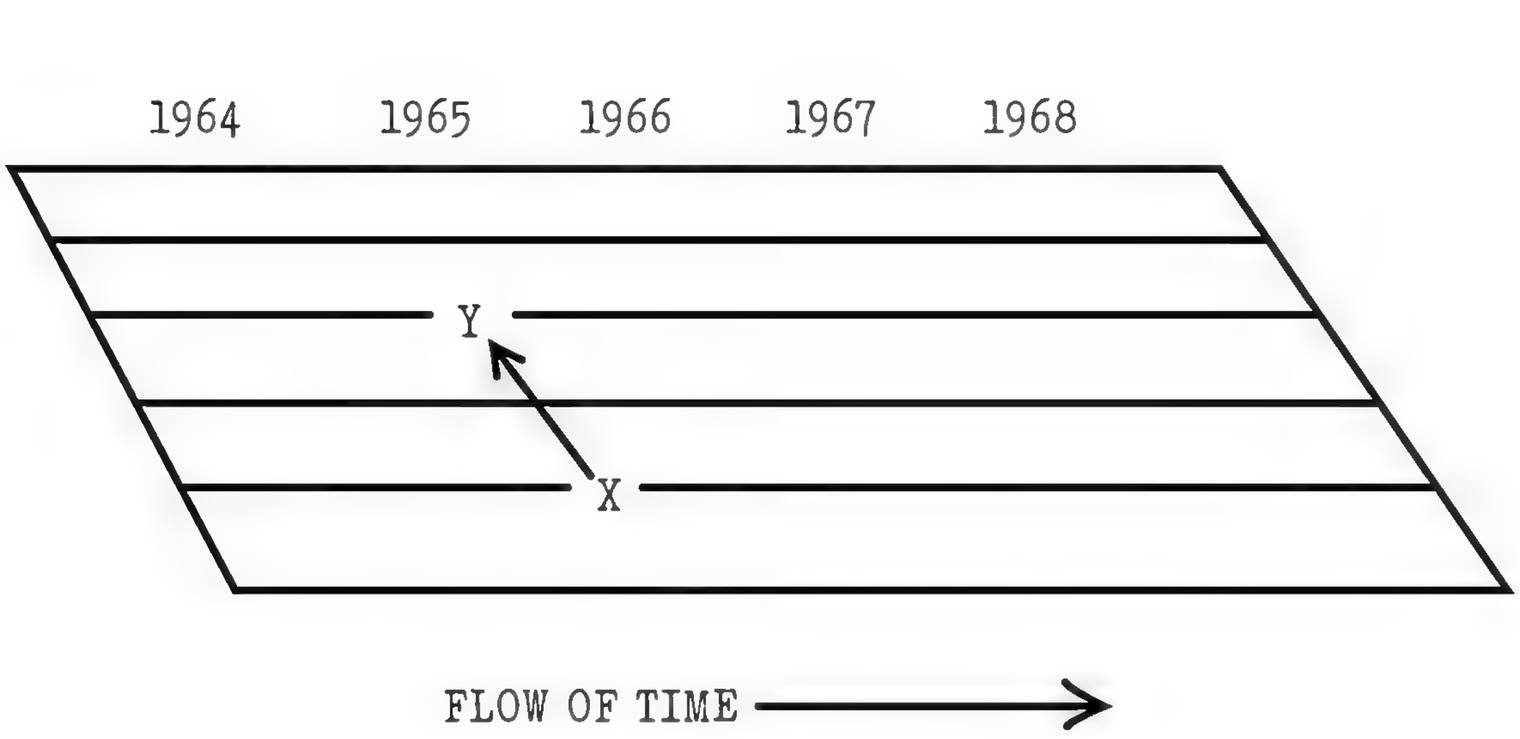


FIGURE 16

In FIGURE 16, Reality Lines are drawn on a single plane. The plane represents the Timestream. A traveller moves from the Reality Line at Point X to the Reality Line at Point Y without leaving the plane of the Timestream.

However, when one travels forward or backward along the Reality Lines, one must figuratively, "jump off" the Timestream in order to become independent of the flow of time. If it were possible to stay on the Timestream while time travelling, one would be subject to aging, and a "time jump" of three years into the future would cause the traveller's body to objectively age three years.[106]

FIGURE 17 shows the apparent movement of a time traveller owner diagram, jumping off the plane of Reality Lines to free himself from the Timestream.

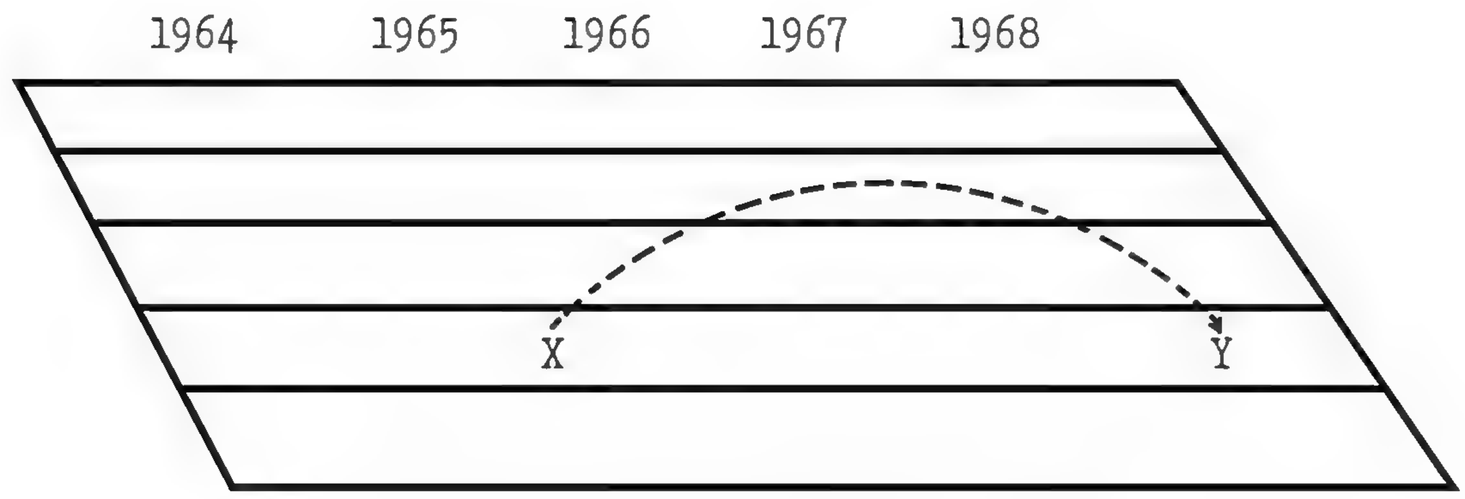


FIGURE 17

By definition, time exists only on the Timestream. Thus the "interval" between one's jump off of the Timestream and the re-emergence occurs in "no time." Time travel, by any method, can be said to be instantaneous, despite what it may have subjectively seem to the traveller. Human beings, as creatures dependent on the concept of Time, would imagine time (duration) even when there is none.

What are the implications of instantaneous time travel? The standard equation for travel thru space is DISTANCE EQUALS RATE TIMES TIME (d = r x t). To illustrate: 60 miles equals 30 miles per hour times 2 hours

Distance = Rate x Time

or one will have travelled 60 miles at a constant 30 miles per hour for 2 hours. To use this equation in reference to time travel, we must clearly define our terms. "Distance" is the number of Atomic Instants one has been displaced in time relative to one's present. "Rate" is the speed at which one moves thru time, expressed as multiples of the rate of time-flow. "Time" is the duration of the movement outside the Timestream.

We have already shown that jumping out of the Timestream means that duration cannot be measured. Yet if we substitute a zero for the "Time" in our equation (d = r x 0), we will have rendered it meaningless since zero times anything is zero. Does this mean that our equation is useless to describe motion thru time?

What it boils down to is the nature of Limbo (or the Timeless World) thru which one is mobile in time. Does "timeless" mean that no time exists at all, and could life exist in such a state? Or does it mean that time is "frozen" and does not pass? In other words, does Limbo contain NO Atomic Instants or does it contain ONE? Limbo could still be considered "timeless" were it to contain but one Atomic

Instant, since time needs a series of moments to allow "passage," which is the fundamental characteristic of time. For our intents and purposes, we will consider Limbo as having a single Atomic Instant, which from the standpoint of those who make access, is an ever-changing one, but from the overview, everything that ever happened in Limbo happened at once. The duration of one's passage thru Limbo is constant despite the rate at which one travels or the distance thru time to be covered.

If we use "1" in our equation, it becomes d = r x 1, which simplifies to d = r. This means the distance is equal to the rate. In other words, the distance one travels depends on the rate at which one travels. To determine one's time-destination, one simply calibrates one's speed.

Both Marvel and DC depict beings who live in the Timeless World of Limbo.[107] Properly speaking, however, it is not truly a dimension despite its independent reality, because one cannot plot a Reality Line of Atomic Instants for it since only one has taken place. This Timeless World, then, would be vibrating at 0 CPU, or not vibrating at all. Thus time travel means a) jumping off the Timestream, b) attaining Chronal Displacement Inertia, and c) achieving zero vibration rate.

At this point, let us consult FIGURE 18 to clarify a possible source of confusion. If time travel means achieving zero vibration rate, why wouldn't it be diagrammed like this?

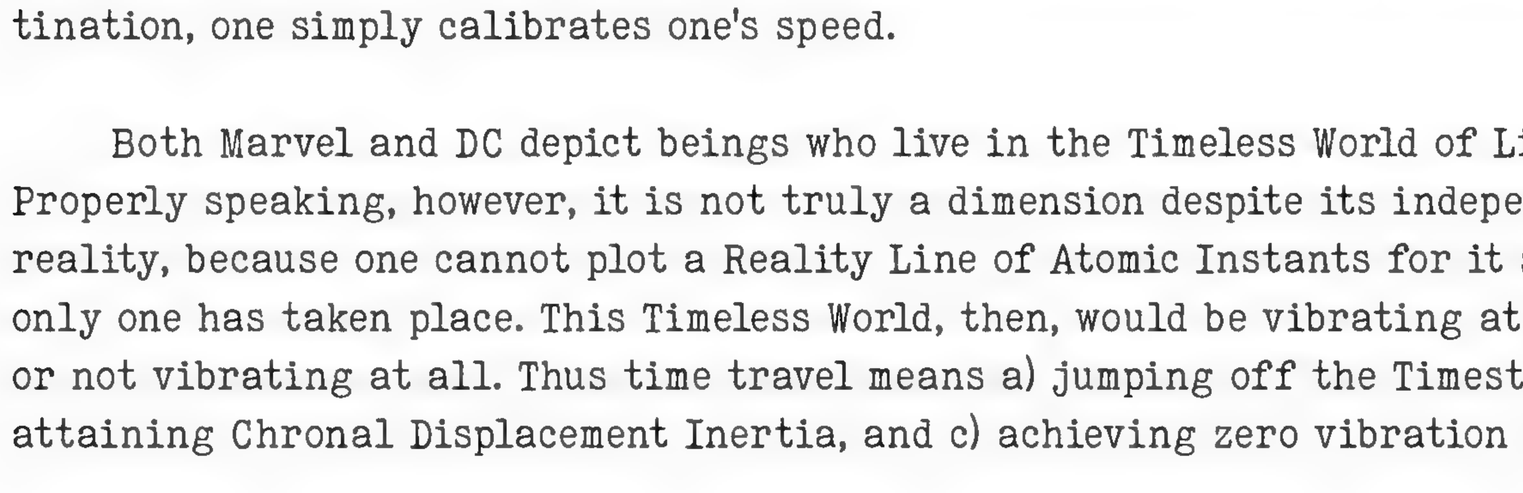


FIGURE 18

FIGURE 18 depicts a traveller from Point X travelling from 1965 to 1968 (Point Y) by sliding down to the zero vibration rate border between the negative and positive dimensions, hence avoiding a time "jump."

The reason why FIGURE 18 is incorrect is because, as we previously noted, there is no Reality Line to correspond to zero vibration rate. Altho it is useful

to designate the border between negative and positive dimensions, this border is NOT a Reality Line. Thus, zero vibration rate corresponds not to a line, but rather the three-dimensional space into which our two-dimensional diagram of Reality Lines is placed. FIGURE 17 is still a more accurate depiction of time travel.

So far we know that when one achieves Chronal Displacement Inertia, one's vibration rate becomes zero, and one enters the Timeless World thru which time travel is possible. The question now is this: how does one get out of Limbo? How does one get a vibration rate back after losing it completely?

What we are dealing with is the concept of Entropy. In physics, entropy is the state of being in which matter and energy is at its lowest possible level of actuality. Once total entropy is achieved, there is only an astronomically small possibility that entropy will spontaneously be reversed, and energy will move within a system again. Our depiction of Limbo being at zero vibration rate means it is in temporal entropy, where the potential energy of time has been neutralized. How can entropy be reversed?

The answer lies not in physics, but in mathematics, and relies on this unique nature of a realm where only one Atomic Instant exists. If the mathematical probability that an organism with zero vibration rate will spontaneously regain some vibration rate is, for sake of example, a billion to one, in a realm where EVERYTHNG occurs AT ONCE, even that one chance in a billion has occurred. In other words, in Limbo, as a common ground to all realities in the Omniverse, any possibility that has any chance of ever happening has happened. Further, everything that could ever happen has happened at THE SAME INSTANT.[108]

Thus, as unlikely as it seems that an organism is in entropy (such as our time traveller) will spontaneously overcome entropy and leave Limbo, it happens instantly. The experience of being in Limbo is subjective. Tho it is possible to dawdle in the Timeless World, most time travellers are barely cognizant of having gone thru the temporal medium.[109]

We have demonstrated how a time traveller breaks free of the Timestream on his own Reality Line, enters a medium where there is no vibration, and leaves that medium after attaining a vibration rate. We have also shown that distance is equal to the rate of speed, so to determine the time era one wishes to travel to, one only has to calibrate one's speed.[110] To travel into the future one would exceed the natural rate of flow of the Timestream, and to travel into the past one would go less than its rate of flow.

TRAVEL INTO THE FUTURE

Let us now consider only time travel into the future. Since we know that there is more than one given future for any present world (since a Reality Line may diverge at any instant), what determines which future a traveller ends up in? Simply enough, the future world is determined by what vibration right the traveller attains after emerging from the zero vibration rate of Limbo. Obviously, each method of time travel has its own unique propensity for a certain vibration rate. For example, Flash's Cosmic Treadmill always takes him to the 2970 Earth that the monolithic Central City is in rather is in rather than the 2970 Earth that the Legion of Super-heroes live in.

Taking into account that a Reality Line can branch off into two (or more) new Reality Lines with their own vibration rates, we can see that it is fortunate that none of the time travel methods are able to regain the same vibration rate the traveller started with. For if a traveller regained that vibration rate after travelling thru time, he might find that his world had diverged, and his old vibration rate no longer corresponds to an existant dimension. FIGURE 19 illustrates.

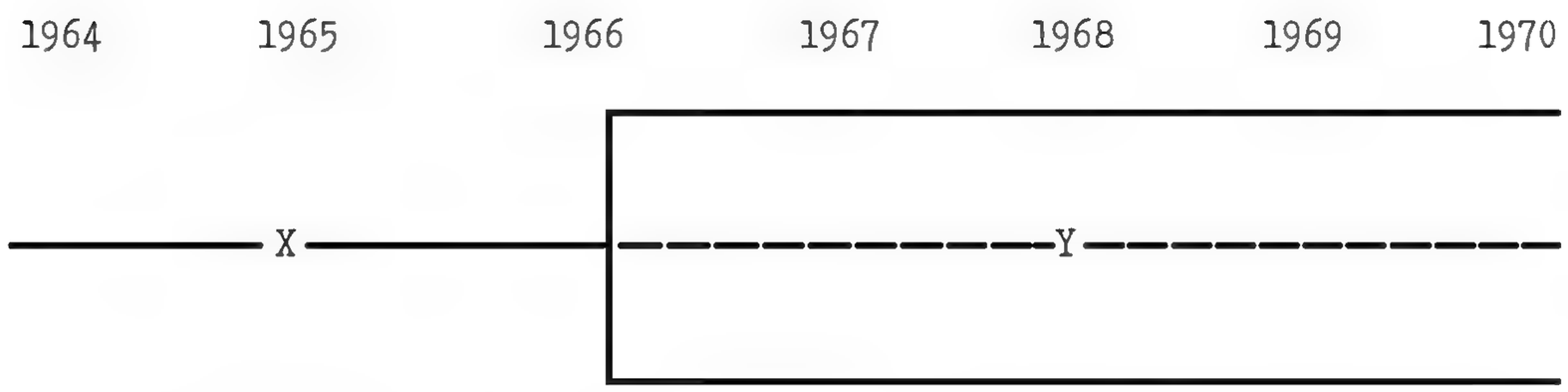


FIGURE 19

FIGURE 19 demonstrates that retaining one's old vibration rate after a time jump would be charted as going "straight." Since a straight path would sooner or later take one to a world whose vibration rate no longer exists, one surmises that the path would not be straight, but rather at a tangent from the original line. This tangent is probably a fixed one for each method of time travel in order to explain the propensity each method has for materializing the traveller in the same future world of a given date. We will refer to how far left or write the traveller ends up after jumping thru time as SIDEWAYS SLIPPAGE.[111]

In FIGURE 20, Sideways Slippage is illustrated. A traveller on a Reality Line at Point X jumps 10 years of the future and ends up on a Reality Line at Point

Y. Angle a, determined by the line corresponding to his initial vibration rate (XZ) and the line corresponding to where he emerged from his time jump (XY), is the traveller's angle of Sideways Slippage.

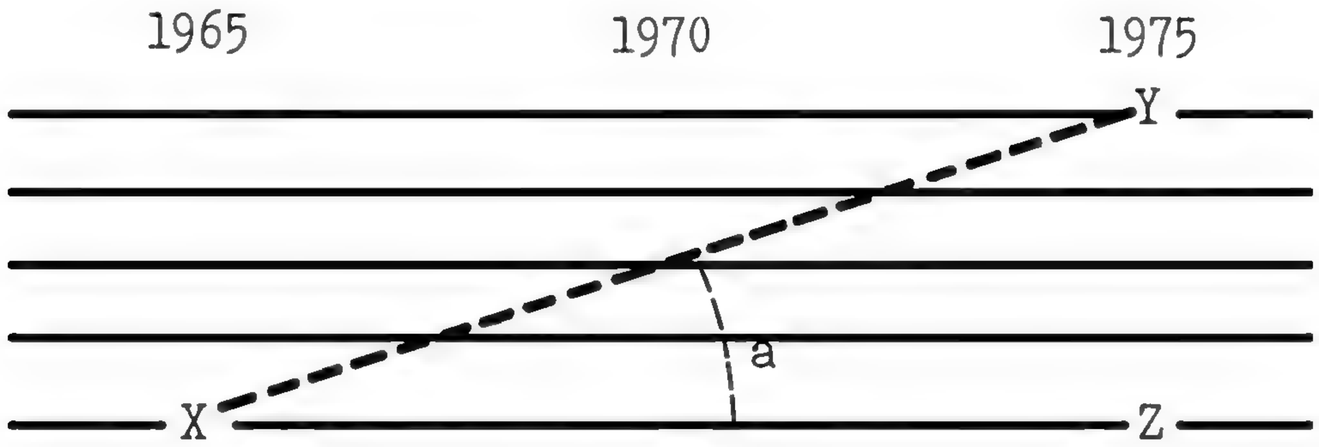


FIGURE 20

What would happen if the traveller in FIGURE 20 made a stopover while making the same ten year jump, in effect making the journey from 1965 to 1975 in two successive jumps? Would he arrive on the same Reality Line in 1975 as he would in one jump? FIGURE 21 depicts the situation.

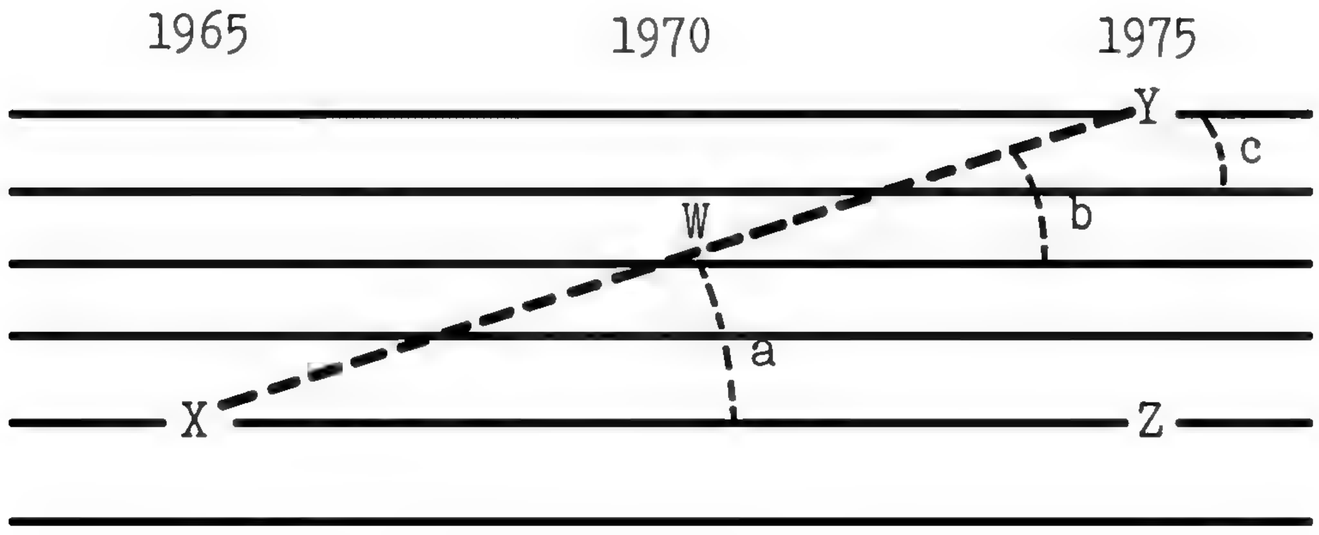


FIGURE 21

The traveller would arrive on the same Reality Line, no matter how many jumps he took because for any method of time travel the angle of Sideways Slippage is constant. To prove this geometrically, refer again to FIGURE 21. if the horizontal line that contains Point X is parallel to the line thru Point W and the line thru Point Y, then the intersecting line thru Points X, W and Y forms equal angles (a = b = c). Thus, farther the time jump, the greater AMOUNT of Sideways Slippage (the farther away from one's starting vibration rate), but the ANGLE of Sideways Slippage is always the same.

The more sophisticated the method of time travel, the slighter the angle of Sideways Slippage would be. In FIGURE 22, the method that produces Angle c is more sophisticated than the method that produces Angle a.

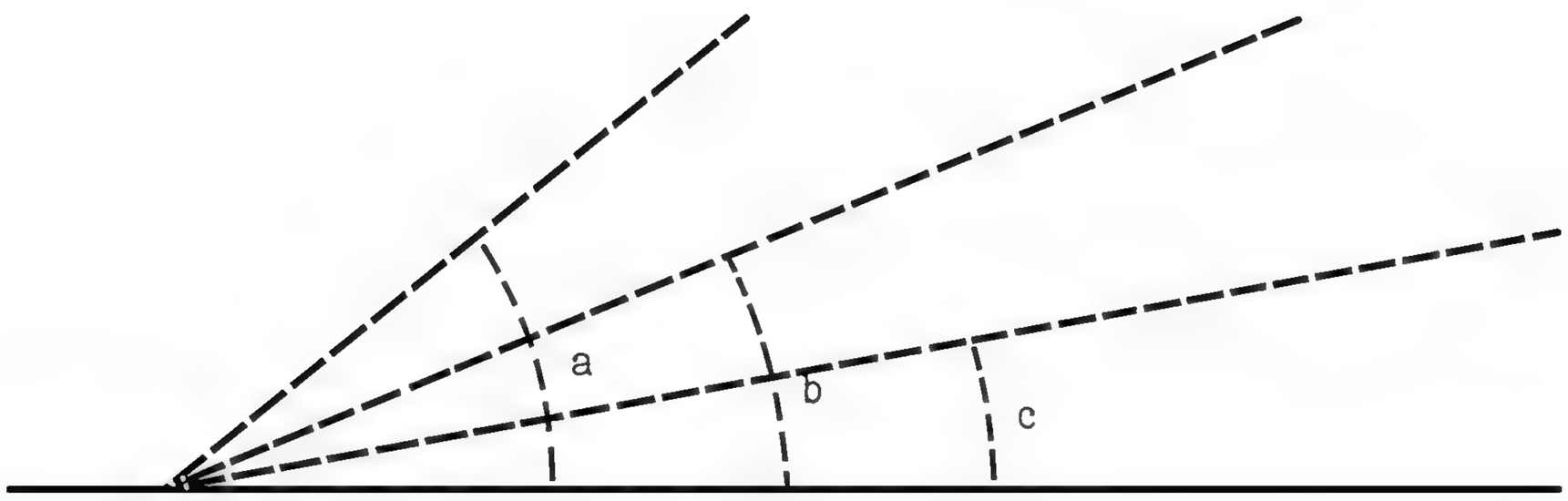


FIGURE 22

What would determine how sophisticated a given method of time travel would be? We cannot be certain since we do not know precisely how Chronal Displacement Inertia is generated.[112] But one might surmise that methods involving actual acceleration close (such as Superman's and Silver Surfer's) would be a cruder, less exacting mode of travel than a seemingly inertialess time travel of Dr. Strange's magic or Green Lantern's power ring.

Assuming that it were possible to develop a method of time travel with no Sideways Slippage, one would only be able to travel into a non-existent future world. Still it is desirable to use a method of time travel with the slightest angle of Sideways Slippage in order to stay within the futures possible from one's present Reality Line and not those of some nearby Harmonic Earth. It is conceivable that a method of time travel could be so crude that after a great enough jump one would be in the future of some world in another Primary System.[113]

It may seem a cause of concern that when plotting the tangent of Sideways Slippage, there appears to be intervals on the Slippage tangent that do not correspond to any Reality Line.

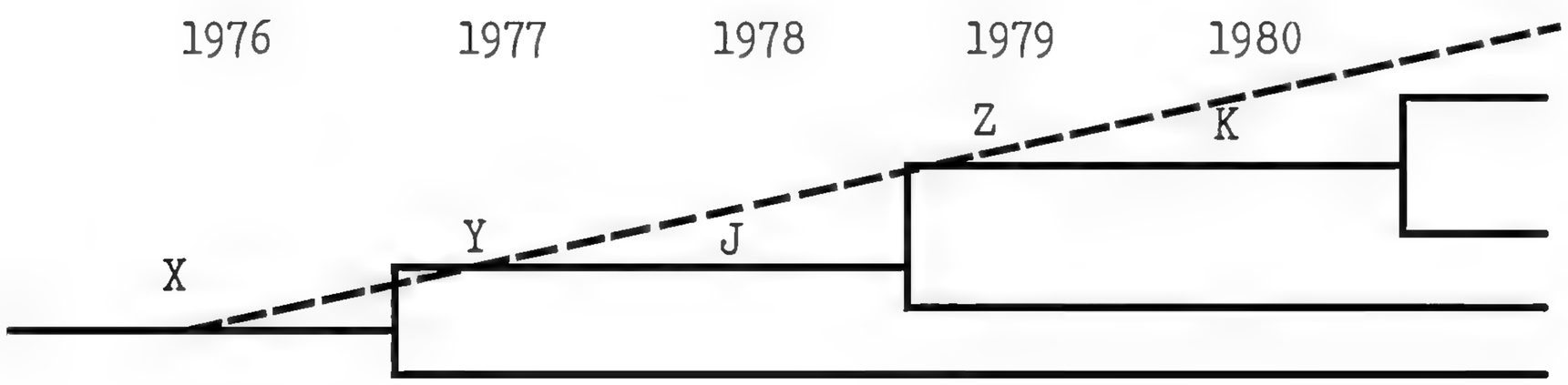


FIGURE 23

In FIGURE 23, a traveller beginning at Point X takes jumps into the future at one year intervals. According to the diagram, in the years 1977 and 1979, the traveller will materialize on a Reality Line (Points Y and Z), but in 1978 and 1980, the traveller has no Reality Line to materialize on (Points J and K). What happens when there is no Reality Line to correspond to a point on one's Slippage tangent?

The answer to this question lies in the shortcomings of our diagram. It must be reiterated that our diagram is but a simplified model of reality to facilitate our understanding of certain facets. As such, it should be viewed with its limitations in mind. The major limitations in this case is that there are no "gaps" between dimensions within a Primary System that would not correspond to a whole number Earth. The parallel lines should actually be represented as no more than a point's width apart from one another, but in so doing, the diagram would be quite difficult to decipher. One wouldn't be able to see the lines thru the mass.

So our depiction of the sideways slippage tangent as a straight line, and the Reality Lines as having space between them serves to give a slightly misleading impression of time travel, rather than disregarding the diagram that has proven a helpful tool to this point, we will attempt to clarify it. On the diagram, the Sideways Slippage tangent that would represent as a straight line actually corresponds to the median of a zig-zag path across Reality Lines, just as a smooth curve is often drawn thru masses of information points to denote their general trend, our Sideways Slippage tangent is drawn thru the zig-zag of corresponding points across Reality Lines. FIGURE 24 illustrates.

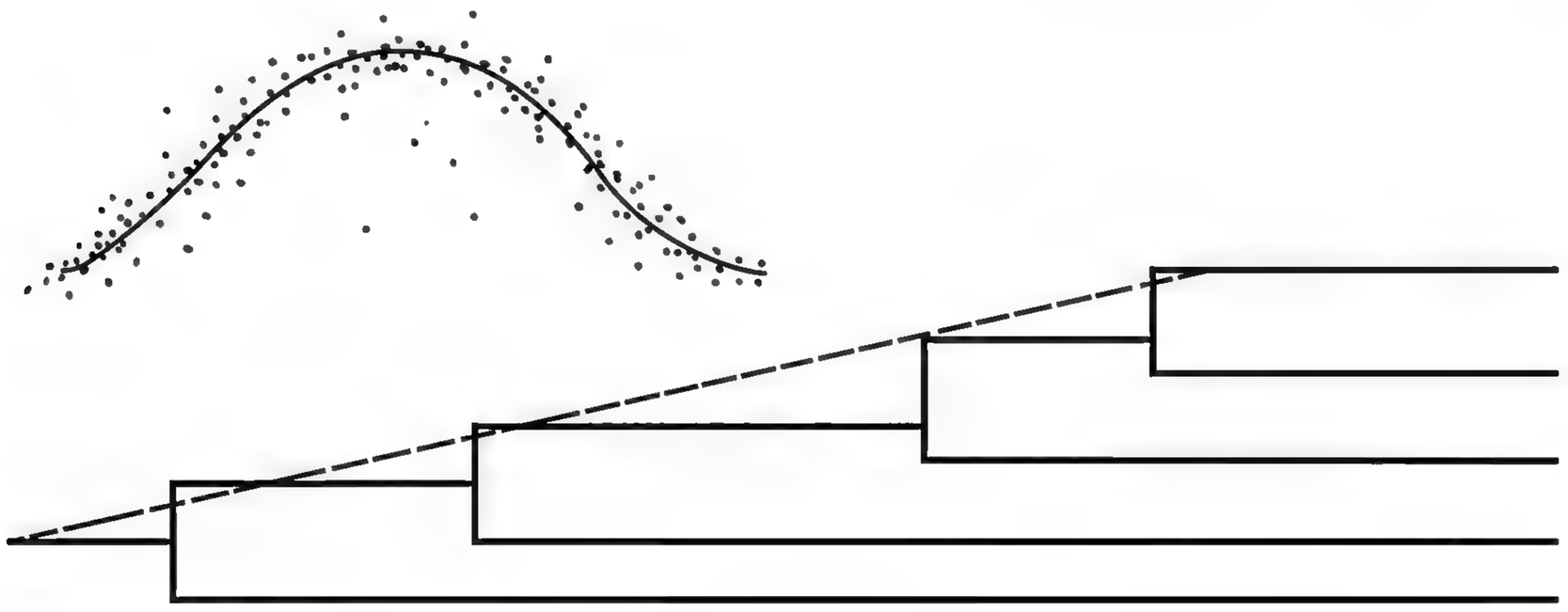


FIGURE 24

FIGURE 24 shows the same Sideways Slippage path as in FIGURE 23, only with the actual zig-zag course thru the future indicated in bold. A traveller's Sideways Slippage corresponds to some whole number Earth in his harmonic sequence at all times. The straight tangent only gives the general direction of the path into the future. It is analogous to the sign at a fork in the road that tells the traveller which road is best travelled.

TRAVEL INTO THE PAST

So far we have been dealing strictly with time travel into the future. We have shown that there is NOT one definitive future for any Reality Line, and that the future world one arrives at will be found on one's Sideways Slippage tangent. Now let us consider the past. Is there one definitive past for any Reality Line? Does Sideways Slippage hold true for the past?

Our diagram of Reality Lines shows us that many futures have a common or shared past, and if one would trace events far back enough, an entire Primary System would have an early segment of past in common.

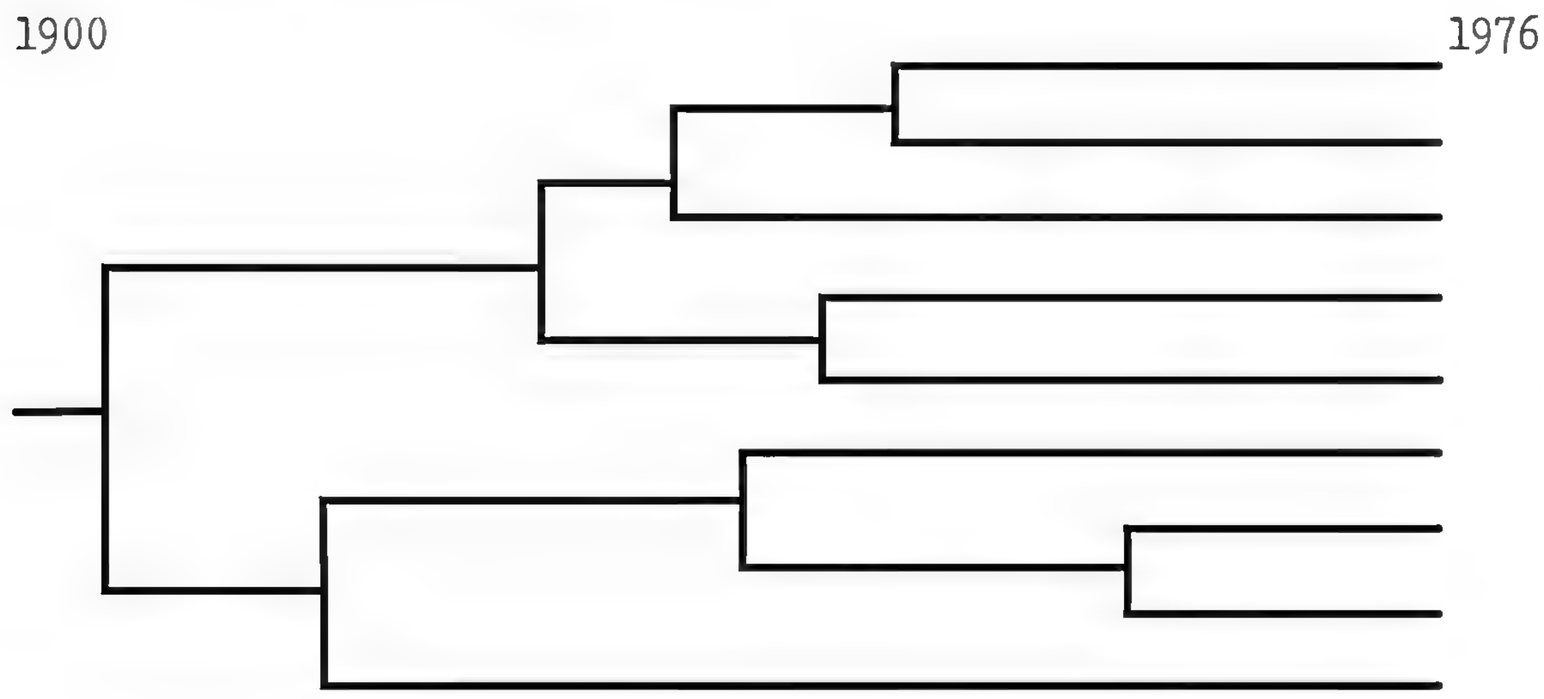


FIGURE 25

FIGURE 25 shows nine parallel Earths existant in 1976, which have stemmed from one Reality Line in 1900. The occurrences that make up the Atomic Instants on the Reality Line segment from which the nine 1976 Earths stem, are common to all. If one would follow the zig-zag path any of the 1976 Earths takes back to 1900, one would see that one and only one set of Atomic Instants (describing a sequence of events) would define the present reality of a world. Thus, for any given world, the past is definitive, altho the future is not.[144]

We have used the Sideways Slippage line to plot the course of a time traveller thru the future possibilities of his world. However, if we were to extend a Sideways Slippage line into the past, as in FIGURE 26, we would observe that a traveller following that tangent will eventually materialize in a different past than his own, i.e., one other than the way he remembers it. Yet, this seldom occurs in time travel tales. The past is usually how one remembers it, at least until one's presense causes some disturbance. Why would travelling into the past be different than travelling into the future?

FIGURE 26

In FIGURE 26, the Sideways Slippage tangent is indicated by a diagonal line. If a traveller at Point X (his present) would go into the future (Point 7), he would be following his Sideways Slippage line. But if he followed that same line into the past (Point W), he would find that the past he remembered (indicated by the bold zig-zag) was NOT the past he was in. Is Sideways Slippage an inappropriate concept in regard to time travel into the past?

Once again, the answer lies in the limitations of our diagram. As one can discern, the diagram gives the impression that there are gaps of space between Reality Lines, and the further into the past, the larger those gaps are. This is, of course, an erroneous impression. Altho it is true that the number of existant Reality Lines are ever-increasing, the gaps between Reality Lines are not getting smaller.[115] It is a shortcoming of our diagram that they appear to do so.

Let us modify our diagram then to compensate for this shortcoming. In FIGURE 27A, we show a typical diagram of Reality Lines with random divergences. The Reality Line segments that define the present reality of an Earth at Point X are shown in bold, along with possible vibration rates. FIGURE 27B represents the same information as a SINGLE line with a changing vibration rate.

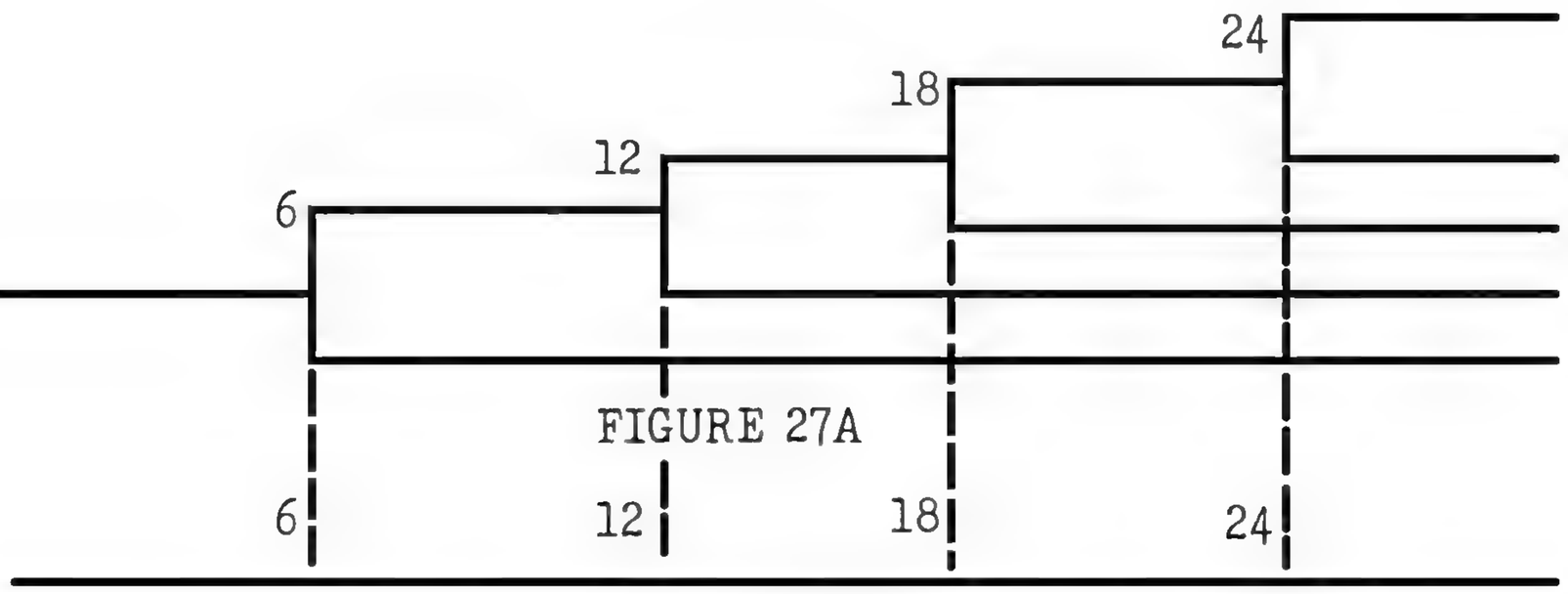


FIGURE 27A

FIGURE 27B

Now if we graph the same parallel Earths as in FIGURE 26 by this new method, we get a diagram in which the common paths of divergent Earths are represented by their own unique lines.

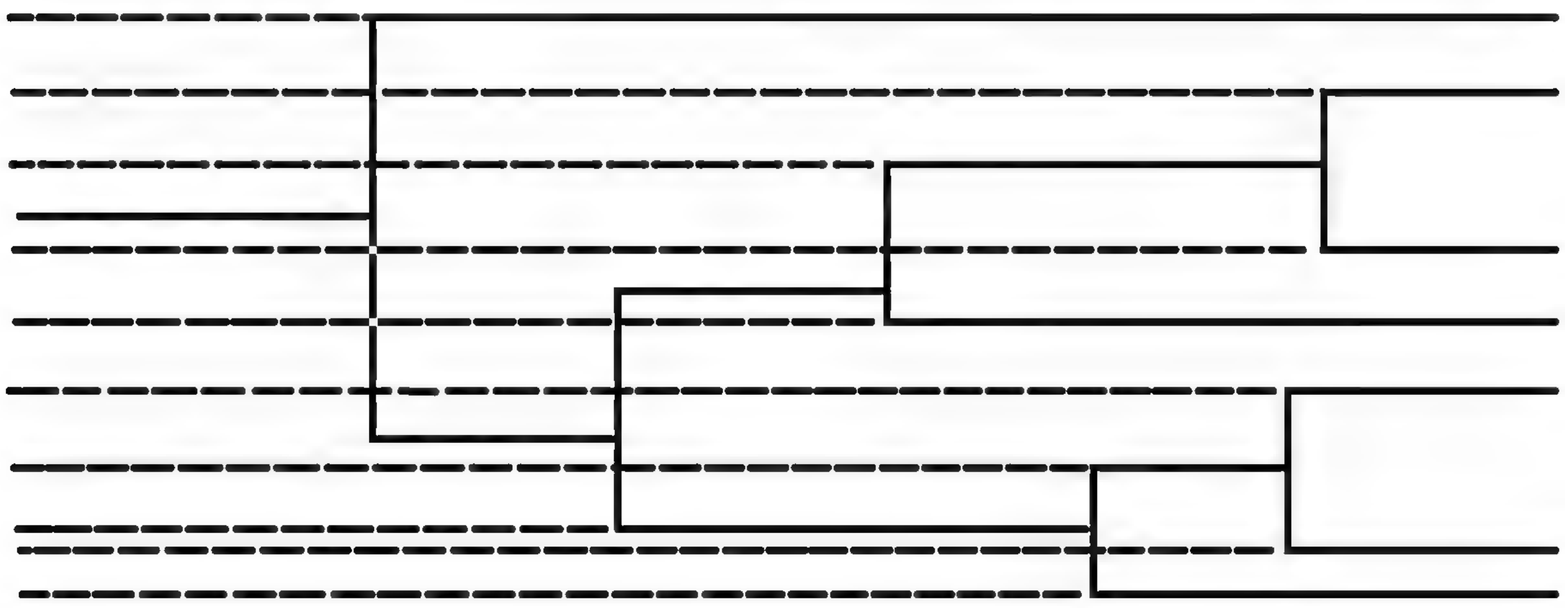


FIGURE 28

In FIGURE 28, the diagonal Sideways Slippage line (indicating the general direction of the traveller) is enmeshed in the dotted lines representing the pasts of the charted parallel Earths. Diagrammed as such, it is apparent that the traveller would have the tendency to remain within the framework of events that he remembers as his own past.

By charting the pasts as in FIGURE 28, one can visualize that one has a greater probability of finding a specific Reality Line (i.e., one's own past) when there are fewer existant Reality Lines. We shall call the tendency to remain within your own remembered past the FUNNELING EFFECT.[116]

Let us now consider that the presense of a being not native to a given time era might do to the reality of the past. If a traveller manages to do something significant enough to cause a Divergent Factor in the past, does that Divergent Factor affect all the Reality Lines that stem from that instant? No, it affects only one Reality Line, a new one. FIGURE 29 illustrates.

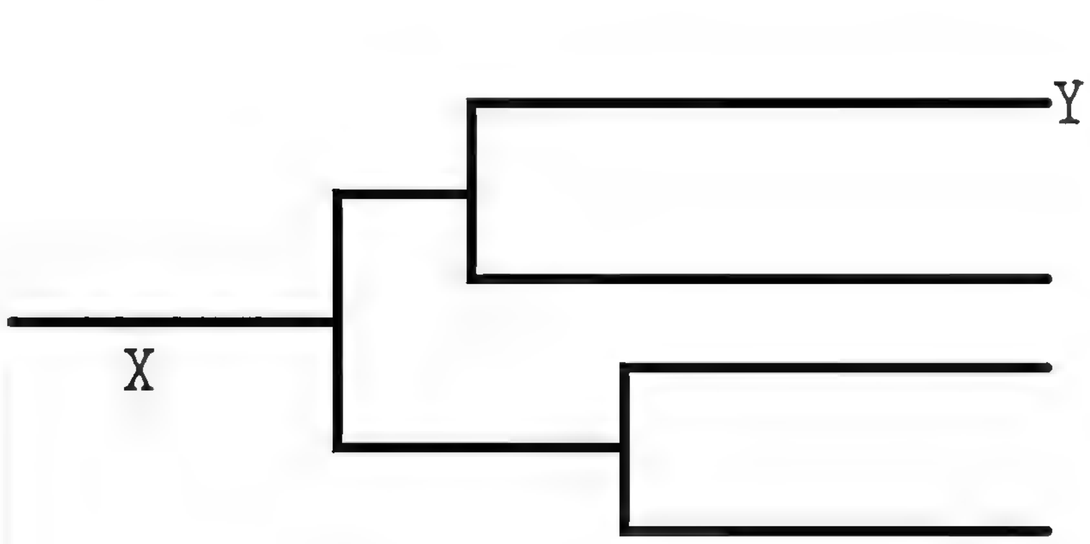


FIGURE 29A

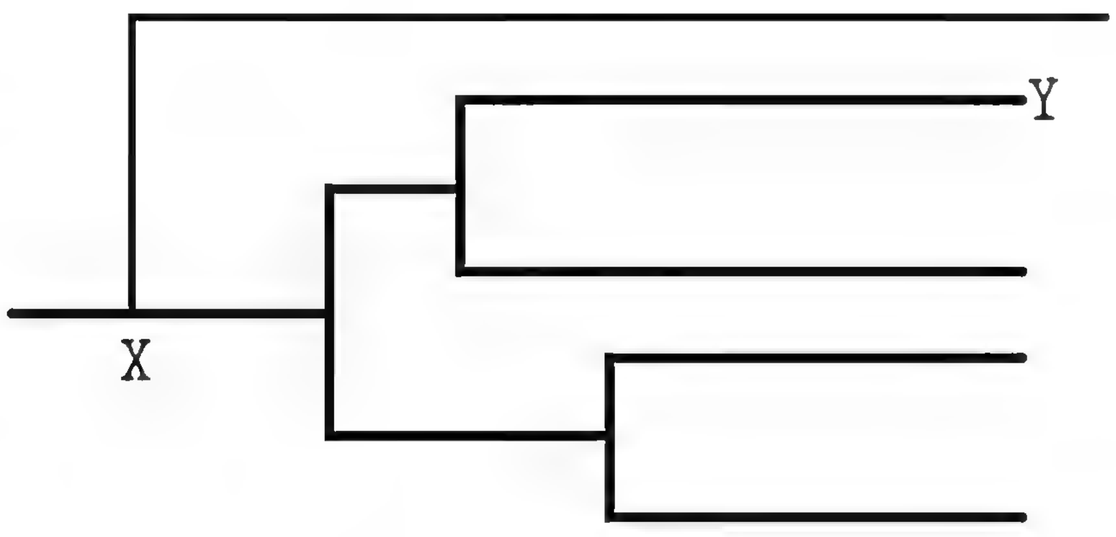


FIGURE 29B

FIGURE 29A depicts a traveller from Point Y who travels back to Point X. At Point X, the traveller causes a Divergent Factor. FIGURE 29B shows what happens to the pre-existant Reality Lines: nothing. All the traveller has done is to create a new Reality Line, which, from the overview, is not radically different than if something indigenous to that time caused the divergence.

It is simply not possible to change something or prevent something from occurring on all possible Reality Lines. The Omniversal rule of reality is: NOTHING CAN BE TRULY UNDONE, THE UNDOING IS MERELY ANOTHER POSSIBILITY.[117] The multiple Reality Line phenomenon eliminates all time paradoxes (since everything is possible both ways or more)[118] and attempts to alter the past are exercises in futility since all one is doing is making the present more diverse.

UNACTUALIZED VIBRATION RATES

There is one last facet of time travel left to be illuminated, and that is a matter that could just as easily have been entertained within our discussion of Dimensions. This matter is whether it is possible by means of time or dimension travel to attune one's vibration rate to correspond to that of a Reality Line that either has not come into being yet, or no longer exists. Upon examination, one can find nothing that would rule out the possibility.

What then would be the state of a physical being vibrating at a rate that does not correspond to any existing Reality Line? The two possibilities are: 1) The traveller's body would be in a material state in a nebulous, immaterial realm of unactualized possibilities, or 2) The traveller's body would be in an immaterial phantom-like state in the material world that either had or will have the vibration rate the traveller possesses.

An examination of related case studies may shed some light on the matter:

In Avengers #56 ("Death Be Not Proud," by Roy Thomas) Captain America and friends use Doctor Doom's time machine to travel to 1945 to witness the death of Cap's partner Bucky. When they arrive, they find they are intangible, phantom-like observers, able to watch the events, but not affect them. Then something happens that causes them to gain tangibility for a few fleeting minutes before fading out completely, transported back to their own time.

In Daredevil #40 ("The Fallen Hero," by Stan Lee), Daredevil and some bystanders are shot with a weapon called the T-Gun which transports them to a nebulous, immaterial realm. After this effect fades, the victims return to their own world, except that they are microseconds out of synchronization, relegated to

being intangible, phantom-like observers.

On the planet Krypton, it had been customary to punish criminals by making them serve time in the Phantom Zone, some sort of realm where the inhabitants are no more than intangible, phantom-like observers free to walk about in the material world.

One can easily correlate the similarity among the phenomena described. This intangibility appears to be the effect of being "out of sync" with time. But being out of sync with one world could make one in sync with another world unless there was no world whose vibration rate possessed the time difference. So it is likely that existing in an intangible state means not only out of sync with time, but more significantly the current vibration rate of the Earth. In other words, one exists a vibration rate that doesn't exist yet or anymore.

The matter of deciding what state of being would correspond to a vibration rate that no longer exists and what state of being corresponds to a vibration rate that has yet to exist can be established by logic. If one were material in a nebulous world, one would logically possess a vibration rate that has not been actualized yet: the unactualized world would not have form or substance. If one were an intangible, phantom-like observer and in a material world, one would logically possess a vibration rate that passed from existence when the world actualized a higher harmonic: the actualized world would have form and substance, but one's self would not.

Because these altered conditions occur so infrequently in time and dimension travel, one may surmise as we did earlier, that they are special vibratory states that a body does not naturally assume thru conventional travel.[119]

CASE STUDIES

In light of our expanded awareness of the implications of multi-dimensional reality on time travel, let us examine some specific stories.

In Defenders #26 ("Savage Time," by Steve Gerber), Vance Astro explains to his past self about time "...No world's future is predestined, only the past is absolute. I can't change the history of my world. But you can alter the shape of things to come. And what would be true even if your future were my past."[120] Astro is more perceptive than most time travellers in that he seems aware that nothing he might do in the past will prevent his future in which Earth is conquered by the Badoon in 3000, from coming about. Thus when the Defenders travel to the future.

to help the Guardians of the Galaxy vanquish their oppressors, they are following a wiser course of action than if they tried to prevent the Badoon invasion from coming about. The former course of action will improve the quality of life on the Guardian's Reality Line, while the letter will only cause another Reality Line to come into being and do nothing at all for that of the Guardians.[121]

Astro's advice to his past self about his ability to alter the shape of the future is also valid from a philosophical point of view. Altho at least one of Astro's future selves will live in a world conquered by the Badoon, there will be other selves who will not.

Silver Surfer #6 ("Worlds Without End," by Stan Lee) on the other hand, demonstrates the Surfer's unenlightenment about time travel. After materializing in a future where a being named the Overlord has conquered most of the galaxy, the Surfer is inspired to go back into the past and prevent the Overlord's birth. He states, "Thus by altering one tiny fragment of the past, I have eternally affected all the days of the future."[122] It is true that he did affect all the days of a future, but obviously the Surfer is not aware there are more than one. Later, he less exuberantly reflects, "Can a future that was, be forever erased?"[123] which gives some hope to his eventual better understanding of the multiplicity of reality.

World's Finest #204 ("Journey to the End of Hope," by Danny O'Neil) thrusts Superman and Wonder Woman into a future Earth of 2171 vintage where pollution and war have destroyed all life. There, a computer relates, "We inhabit one of many possible futures. One of which you find grim and bleak...My calculations indicate that in other futures mankind survived and prospered."[124] The computer then requests Superman to try to prevent the reality it is in, and Superman agrees to do so. One would think a machine able to determine that there are multiple realities would also know that the barren world of 2171 it exists in will always be an alternative, and any fiddling Superman does in the present may cause more alternatives but do nothing to prevent existant ones.

Somewhat similarly, the serial that ends in Daredevil #84 ("Night of the Assassin" by Gerry Conway) involves a machine named Baal who outlasts humanity some ten thousand years hence, and sends back an agent to change the course of history in the 20th Century in an effort to circumvent its own destruction. Some machine-like "final sons of man" from an era after the destruction of Baal appear to deal with the agent. One would guess that one doesn't have to be human to think that altering the past will make one's present any more pleasant.

In Iron Man #5 ("Frenzy in a Far-Flung Future," by Archie Goodwin), humans from the 24th Century teleport Iron Man's alter ego to their time to execute him so he will be prevented from inventing a computer that eventually rules the world of their time. Iron Man protests, "To help the human race, I am as ready to lay down my life as the next man, but you're tampering with time paradoxes. You can't be certain that will happen."[125] He is aided by a girl from that time who tells him that it's not the fault of his invention that the world is how it is, but the fault of the people who have become dependent on it. Eventually, Iron Man conquers the computer and goes back to his own time. Iron Man is admirable in that he does not try futilely to change the future, but rather, tries to make the best of it as it is. The hero also seems implicitly aware that the future he glimpsed is not the only future there is, since he made no resolve not to invent the computer that would bring the future about. Either that or he is just fatalistic.

In Superboy #198 ("The Fatal Five Who Twisted Time," by Cary Bates), the Fatal Five install a Time-Sorter device in the 1950's which causes the Legion of Superheroes' headquarters to vanish in 2973 supposedly be(sic) means of a "paradox." Even without knowing that paradoxes are impossible in a multi-dimensional reality, one can conclude that the Time Sorter does not work by causing paradoxes. Rather than all reality for the line changing so that no one was even aware the Legion ever existed, an empty field appears where the Legion headquarters once stood, implying that something was once there that now is not. It is most likely that a Time-Sorter caused their headquarters building to vibrate at the rate corresponding to when the device was planted (the 1950's) which made it intangible to its own time era. The Time-Sorter, then, is like some long-range Phantom Zone projector.

Beginning in Marvel Team-Up #9 ("The Tomorrow War," by Gerry Conway) a war is waged between the Tomorrow Man of the 23rd Century and Kang the Conqueror from the 41st. While travelling into the future, Spider-Man and Iron Man are depicted as having a brief subjective stay in Limbo. Spider-Man's second arrival in the future after going back to his present for help occurs mere seconds after he left. It would have been even more interesting if he had arrived with help before he left to get it, which of course, would be quite possible.

In a four-part tale ending in Thor #245 ("Temple at the End of Time," by Len Wein), Thor and crew battle the Time-Twisters, beings from the future who are winding backwards thru time, destroying the Earth at 3000 year intervals. At the conclusion of the story, the Twisters have seemingly been prevented from wreaking ha-

voc and the 50th Century Earth has been restored. This is yet another tale where the heroes have taken pains to avert a menace that at best can destroy but a handful of Reality Lines anyway. Their efforts, of course, are not in vain since they succeed in diverging a reality where the Time-Twisters are not triumphant, but they cannot prevent a future that has been. The last page of the tale depicts the hero sitting about incognizant that reality has diverged at that moment.

Superman #295 ("Costume, Costume, Who's Got the Costume?" by Elliot Maggin) acknowledges the parallel existences of two major futures in the DC mythos: that of the Legion of Super-heroes and that of Kamandi. Unfortunately, the villainous Time-Trapper is said to have the ability to prevent certain futures from coming about. Were such a power pack possible, it would be Omniversal in magnitude and more than all the heroes from all the dimensions could confront, let alone just Superman. More likely is that the Time-Trapper hoodwinked the Green Lantern Corp., Superman, and the Legion into believing his power was that awesome in scope.[127]

Fantastic Four #153 ("Worlds in Collision" by Tony Isabella) features two alternative futures at war with one another. In one, women rule and all men are slaves; in the other, men rule and all women are slaves. In the conclusion of this three-part tale, Reed Richards supposedly observes that the worlds of the Femizons and Machus have merged due to a "contained nuclear explosion."[122] What more likely happened is that the meeting of the people from the two dimensions produced cultural shock causing a Divergent Factor that produced a dimensional world that eventually had characteristics of both. Altho the creation of such a "merger" future is rare, it would not affect the pre-existant Reality Lines.

In Justice League #63 ("Time Signs a Death Warrant for the Justice League," by Gardner Fox), a group of time travellers from the future visit 1968 to intangibly witness what their history books record as the destruction of the JLA. Their intangibility could easily be effected by attaining a vibration rate that no longer exists in 1968. The travellers returned to their own era when a "time storm" threatens. Once back in their own era they realize that it wasn't the destruction of the JLA they had gone back to witness—the time storm must have played tricks with their memories. Of course, their history texts could have recorded it both ways, since it could have occurred each way for different Reality Lines. However, only one of the ways would have been in the established past for that future.

In that same issue, Superman performs an ingenious time trick, a first in the annals of comics. Under a compulsion to kill his fellow members, Superman takes a short three-year jump into the past which "automatically" shifted the Superman of 1965 to take his place in 1968. Having it take place automatically

would be in keeping with a single Reality Line premise, "A being cannot co-exist with himself at the same time." However, in multidimensional reality, this is not an impossibility.[129] So by what mechanism did the two selves exchange places? Probably Superman-1968 verbally requested Superman-1965 to take his place. Why did Superman-1965 mislead the JLA by referring to it as "automatic?" Perhaps the time storm that played havoc with the time travellers' memories also affected this.

In Green Lantern #51 ("Green Lantern's Evil Alter Ego," by John Broome), Green Lantern's mentors, the Guardians of the Universe, explain why the 20th Century Earth's Green Lantern is sometimes summoned to travel 38 centuries in-to the future to cope with menaces there. They explain that altho they cannot travel thru time, they can see into the future, and they hereby learned that Earth would not need another Green Lantern for thousands of years. They also saw that the people of the 58th Century would have certain emergencies but would be scientifically advanced enough to teleport Green Lantern to their time. It is obvious that the Guardians are not as omniscient as one might hope. Their device for looking into the future apparently sees only one future Reality Line for Earth. The Guardians are mistaken to assume that because one Reality Line will not have a Green Lantern for more than 38 centuries, none of them will.[130]

In Avengers #143 ("Right Between the Eons," by Steve Englehart), Kang the Conqueror meets his demise when he gets his atoms scattered thruout time. One of his future counterparts, Immortus, pronounces: "Now, Kang no longer exists... and Rama Tut shall never come into being. Neither, too, shall Immortus have been. The circle is broken. We are free."[131] Immortus fades away. Unfortunately, his explanation would only be true if there were but one Reality Line. In multi-dimensional reality, of the disintegration of Kang would have no effect on possible past and future Kang incarnations. In other words, altho Immortus cannot come about without first having been Doctor Doom, Rama Tut, Scarlet Centurian, and Kang, none of these necessarily have to become Immortus.[132] Obviously, on one Reality Line they do, but it need not be more than one. Hopefully Kang's dis-integration in 1860 will mean he will not pestering the heroes on "Marvel-Earth" 1975, but he still exists on other Reality Lines as Kang and all his other permutations. One wonders why Immortus, dwelling in Limbo itself and un-doubtedly privy to the fundamental nature of Reality, would seek to deceive the Avengers as he did.

In Justice League #37 ("The Earth Without a Justice League," by Gardner Fox), Johnny Thunder's crooked dimensional counterpart orders the Thunderbolt

to change the past so the individual heroes of the JLA never come about. The Thunderbolt points out "You realize of course, since there are no more super-powered crimefighters here, this Earth has been altered,"[133] meaning it is not "Earth-One" any more. They dub the alternative Earth "Earth-A." The JSA, a looking for "Earth-Two's" Johnny Thunder, find him on "Earth-A" which they mistake for "Earth-One." They get into a battle with the JLA's evil counterparts, apparently believing they must be defeated in order to restore the good JLA. Obviously the JSA thought that the creation of "Earth-A" negated "Earth-One". This would only be true in a single Reality Line universe, and the JSA, hailing from another Reality Line themselves, should have realized it. The Thunderbolt even fools himself into thinking he negated "Earth-A" at the end of the two-parter. In reality he could no more undo "Earth-A" than he could "Earth-One." One can compound one's mistakes and ignore them, but never erase them when one is dealing with Reality.

Warlock #11 ("How Strange My Destiny," by Jim Starlin) depicts Warlock killing his evil future self, the Magus, and supposedly preventing him from coming into being. He states, "Thus I now allow...my universe to end. Then be reborn again without the dark stain of the Magus having ever marked it."[134] As his other self dies, Warlock witnesses an incredible cataclysm, which his erstwhile companion, Thanos, describes as "the explosive reshuffling of time."[135] When Warlock returns to Homeworld he finds that a new church has risen to take the place of the one he founded as the Magus, which would seem to indicate that the past has changed. In light of multi-dimensional reality, we know that the introduction of a Divergent Factor (Warlock's killing his other self) does not undo one Reality Line, only causes another Reality Line to come into being. Thus it was not Warlock's world that changed, but Warlock who changed worlds (along with his companions). The explosion that was depicted may well have been the subjective sensation of forced dimensional travel.[136]

In Thor #178 ("Death is a Stranger," by Stan Lee) Thor gets into a particularly sticky bind, and so uses his mystic hammer to make time "turn back" (a hitherto unrevealed attribute of Mjolnir) to a period before the conflict began. Oddly enough, he could remember the immediate future and take steps to avert it while his nemesis could not. Thor did not of course turn back time itself, but instead took a small time-trip. By doing so, he would still retain his memory, and if he succeeded in averting what he remembered, would have caused a Divergent Factor to bring another Reality Line into being. It is fortunate that Thor did not meet himself doubling back in time like that.

In Giant-Size Fantastic Four #2 ("Cataclysm," by Gerry Conway), mailman Willie Lumpkin is lured to Dr. Doom's time machine where he "apparently changed the course of history," according to the Watcher.[137] The Fantastic Four are sent back into two past eras to "undo" the damage that Lumpkin has caused. After doing so, they learn that a being named Tempus caused the mailman to do what he did in order to create "paradoxes" that would upset time "causing untold chaos, mixing age and age, eon and eon."[138] His motive is simply that he wants to die. Multidimensional Reality negates the possibility of paradoxes so Lumpkin's presence in the past may cause new Reality Lines but not affect pre-existant ones. Thus it would seem that the paradox gambit was a ploy by Tempus to lure the FF to his realm (Limbo?) where they could destroy him (as they did by knocking him over). The threat of paradox was used to give the Fantastic Four a greater incentive to assist in his death-wish.

In Marvel Team-Up #41-44 (by Bill Mantlo), Spider-Man, Scarlet Witch, the Vision, Dr. Doom, and Moondragon battle Cotton Mather and his demon master the Dark Rider during the Salem witch trials of 1692. In Team-Up #42 ("Visions of Hate"), Spider-Man states that the Vision "knows this is all history—that we can't change any of it—."[139] This is patently false—future travellers can change the past without affecting their own present Reality Line—but Spider-Man never claimed to be a knowledgeable time traveller. In #44 ("Death in the Year Before Yesterday"), Spider-Man learns that while he was battling the Dark Rider, some Salem citizens were hanged as witches, and he goes away brooding that he was "too late."[140] Apparently he forgot his erroneous statement of three issues before and thought he could change the past and keep them from their doom. Not knowing enough about time travel, Spider-Man did not realize that he could have taken a time jump to save those people merely by doubling back on himself, if it were really that important to cause still another new Reality Line.

In Fantastic Four Annual #11 ("And Then the Invaders," by Roy Thomas) the FF use their time machine to go back to 1942 to reach some "vibranium" that accidentally got mislaid in time and enabled the Nazis to develop weapons with which they won World War II. Altho Reed Richards does make some uneducated inferences about reality,[141] he admits in the end that they had been on an alternate Reality Line rather than the altered past of their own.

It is beyond the scope of this paper to deal with the fallacies and misconceptions in all the many time travel stories. The two main things to be learned from these case studies are: 1) Most inaccuracies stem from not applying the multidimensional premise to time travel, and 2) Most inaccuracies can be blamed on the perceptions and deceptions of the characters rather than the authors.

THE OMNIVERSE

In the previous sections on Dimensions and Time Travel, we have dealt with parallel dimensions, their assorted nature, their relationships to one another, and travelling forward, backward, and sideways among them. These were all matters pertaining to parts of the Omniverse, the continuum of all universes. Just as astronomers have had to study stars and galaxies before they could make assertions on the nature of the universe, we have had to study the universes to make assertions on the nature of the Omniverse.

The Omniverse is the sum total of all the universes, just as the universe is the sum total of all energy at every wavelength, all matter from atoms to elements, to organic and inorganic matter material, to planets, to stars, to clusters, to galaxies, to local groups, and all the space in between. The Omniverse extends the length and breadth of time and space. The Omniverse is the "structure" that binds individual universes into a continuum. The Omniverse has properties and "laws" just as the universe has properties and "laws." The Omniverse encompasses more than all matter and energy in a closed system; it encompasses all matter and energy in all its possible forms and manifestations. Beyond the boundaries of the universe, there may be nothing. But within the boundaries of the universe are an infinite number of other universes, all of which comprise the Omniverse.

ORIGIN

The first question that would enter one's mind in contemplating the Omniverse as a whole is its terminal points. Does the Omniverse have a beginning and ending? That the Omniverse is not an "always was," originless construct is pre-supposed in the harmonic nature of reality: for a vibration right to be a high number now, it must have been a lower number before, and far enough "before" it would be a prime number. Since prime numbers are irreducible, they denote "starting points," as it were. The Omniverse, composed of individual universes, would come into existence with those individual universes. Let us first look at the origins of the universes before we consider the origin of the Omniverse.

If, as this treatise contends, Reality contains the capacity for every permutation, imaginable and unimaginable, this would extend to the very origins of the universes themselves. In other words, the origin of the universe may be different from one Primary System to the next. The primary Divergent Factor separating prime universes would be its very creation. Just as every permutation of reality after

"Creation" could exist, every permutation of "Creation" itself could also exist. Thus there are theistic universes, purposefully created by a sentient being ("God"), and there are atheistic universes, created and engineered by a series of happenstantial random occurrences. Every myth of "Creation" devised by sentient beings may be true for some Primary System in the Omniverse. Unfortunately for those sentient beings, they cannot know whether their myth of "Creation" is true for their particular universe.

All reality in its pre-Omniversal simplicity corresponded to the vibration rate 1 CPU. Then the universes were "born," each assuming a prime numbered vibration rate. These prime numbered universes "begat" their harmonic multiples with the first Divergent Factors that occurred after the origin of the prime universes. Thus, all the worlds within each Primary System have in common the event of their origin, and differ phenomenally from other Primary Systems at their very inception. The prime vibration rates pass out of existence with their first divergence, and only harmonic multiples remain, climbing to ever higher values with each divergence.

We can answer "what" the origin of the Omniverse is: the Primal Act that conceived the 1 CPU matrix that permitted dimensional variations on the specific creations of the universes. FIGURE 30 illustrates.

FIGURE 30

FIGURE 30 demonstrates how 1 is a factor of all primes and corresponds to Reality in its pre-Omniversal simplicity. It also shows that the infinite prime universes came into existence at the same "time." Time itself began with the actualization of the 1 CPU matrix.

Altho "what" the origin of the Omniverse is has been defined, the "how" or "why" aspects are still beyond our cognitive grasp. In our discussion, we have presupposed that the Omniverse has but once specific origin, that the creation of the one CPU matrix happened only one way. If the multiplicity of Reality extended to the very creation of the multiplicity of Reality, we would have multiple Omniverses, a possibility that the author has difficulty in imagining.

We will discuss the other terminal point the "End" of the Omniverse, after considering three other Omniversal issues, "Homogeneity," "Afterlife" and "Time."

HOMOGENEITY

Is reality thruout an entire individual universe homogeneous? Does the reality of an entire universe diverge to different vibration rites with a Divergent Factor anywhere in that universe, or are there local patterns? In specific terms, does a Divergent Factor occurring because of events in a world a billion light years from Earth affect the vibration rate of Earth?

We have already defined an Atomic Instant as everything that happens EVERYWHERE in the universe in a unit of time; but were we oversimplifying? The answer to these questions lies in an examination of the implications of both homogeneous and heterogeneous universal reality.

The major drawback with a homogeneous universe is that the universe is so large with so many interacting elements that it would be reasonable to surmise that something significant enough to be a Divergent Factor is occurring somewhere AT ALL TIMES. In effect, this would mean that if the reality of the universe were one system (homogeneous), the whole universe would be changing its vibration rate constantly. Such a system would be impossible to study.

If the reality of the universe were heterogeneous, that universe would be changing its vibration rate in pieces. What would determine the size of these "pieces"? They would have to be the smallest environment possible that contains all the interacting elements that could enter into a Divergent Factor for that area. We shall call such a homogeneous pocket Reality a PHENOMENAL FIELD, and its parameters shall be the PHENOMENAL HORIZON.

What justification do we have in postulating the existence of Phenomenal Fields as the building box of universal reality? In his Special Theory of Relativity, Einstein asserted that time behaves differently in moving systems and near the gravitational fields of massive objects. If time demonstrates the property of relativity, might not reality? The Phenomenal Fields, rather than extending like gravitational fields from massive objects, would extend from regions of phenomenon-manipulating potential. This potential would invariably be found to the highest degree in areas where there are sentient beings who can alter their environment.

Specifically, how far would the Phenomenal Field surrounding Earth, for example, extend? Only far enough to take into account all of the elements that could have a bearing on the reality of Earth, i.e. enter into a Divergent Factor. Thus, the sun and moon would be within the Earth's Phenomenal Field, and

possibly the rest of the solar system, but it would not extend much farther than that.

There could, of course, be interaction between Phenomenal Fields that would result in a permutation of reality for one or both of the environments. For example, the explosion of the distant planet Krypton eventually affected the Phenomenal Field of Earth when one of its survivors arrived on Earth. Yet, Krypton is not an omnipresent influence on Earth reality so it cannot be included in Earth's Phenomenal Field.

Would the existence of Phenomenal Fields each with their own separate vibration rates mean that simple travel thru space would involve going thru dimensions? What must be taken into account here is that we are now dealing with moving objects, and as we previously noted, time behaves differently in systems in motion. If the speed of travel were slower than the speed of light, passage from one Phenomenal Field to the next, would be very gradual and involve vast expanses of interstellar medium with relatively lower vibration rates (since so few divergences would occur here). At post-light speeds, the traveller would be subject to some highly unorthodox conditions that may not only stop time, but warp space. Whether the traveller is gradually re-attuned to the local vibration rate or rapidly re-attuned thru warp-space, the net effect would be the same.

Having dispensed with the various objections that make a universe of heterogeneous reality seem unwieldy, we will postulate that REALITY IS LOCALIZED IN INTERLOCKING PHENOMENAL FIELDS OF HOMOGENOUS VIBRRATION RATES, and REALITY, LIKE TIME, IS RELATIVE. We shall amend our definition of Atomic Instant to "Everything that happens everywhere in a Phenomenal Field in a unit of time." Thus our diagrams of Reality Lines thruout this text have been describing the reality within a single Phenomenal Field and a far more complex diagram would be needed to describe the reality of all the Phenomenal Fields in one universe.

AFTERLIFE

When a living being succumbs to death and is said to pass on to a "higher plane of existence," where, dimensionally speaking, would this higher plane be? Where is the spirit world? Where is Heaven and Hell? Are people reincarnated on other Reality Lines?

The answers to these questions are, of course, all-inclusive ones. If every permutation of physical reality is possible, so, too, with non-physical reality. Hence the mythological realms of Heaven and Hell, like those of Hades and Valhal-

la, do exist as fractional dimensions, satellites to some Primary Systems. Reincarnation may also be in effect in some Primary Systems. Every permutation of Afterlife (and Beforebirth) may be instituted somewhere in the Omniverse. Again, the only unfortunate thing for us mortals is that we do not know which system is in effect for our Primary System.

TIME

"Time flows like a river down the Reality Lines," is an apt simile. Just as water flows in a river in a single direction at varying speeds from bank to bank, time flows thru the timestream in a single direction, its rate of flow varied and ever-changing. The flow of time is relative to vibration rate. As Reality Lines diverge in new vibrational values, time changes its speed accordingly. The standard of time for each Reality Line is a function of its vibration rate.

The ratios of any two time-rates varies according to the current vibration rates. Because any two vibration rates are following the same general pattern, i.e., ascension into higher values, the ratio is not going to dramatically change thruout eternity. Denny O'Neil's assumption that "Earth-One" and "Earth-Two" were going to be twenty years out of sync at the "end of time (cited on p. 6 of this text) is based on the faulty assumption that the Reality Line with the faster vibration rate (hence time-rate) will always have the faster vibration rate. With random divergences on the part of both Reality Lines, this will not be so.

How great a variance in time-flow is there across the breadth of the timestream? This is a difficult question to answer since measuring time-flow is at least as difficult as measuring vibration rates. One cannot use phenomenal reference points (such as the birth of Christ by our Reality Line's reckoning) since there is now a phenomenal dependence from one Primary System to the next to provide calendar starting points. Whatever the variance in the rate of time-flow, no Reality Line will reach the hypothetical "end of time" before any other (except in cases of untimely occurrences such as the accidental destruction of a universe or two).

ENTROPY

The evolution of the Omniverse would roughly correspond to the evolution of the universe, since the Omniverse exists in the same space. Just as the universe is observed to apparently be expanding, so, too, is the Omniverse. Cosmologists who believe the universe has terminal points, describe two main scen-

arios for the end of the universe: either it reaches a point where it can expand no more and gravitational forces begin the inexorable process of contraction until the universe is compressed into a single solid nucleus; or the universe continues to expand until it is so distended that matter and energy are in no state to do anything anymore.

The Omniverse is expanding in another direction than the universe. With each divergence, there are at least two worlds where one existed before. Even a cursory acquaintance with mathematical progressions will reveal that the levels of reality are becoming ever increasingly more complex. In our diagrams, we have employed small-numbered CPUs for clarity in our examples, but it is probable that none of the lower numbers exist anymore, probably not even in the sparsest reaches of space.

Matter and energy in the universe remain constant; it cannot be created or destroyed. In an expanding universe, the amount of matter and energy obviously is being spread over an ever-increasing area. When energy is too distended, it reaches entropy, a state of inert uniformity where its potential is neutralized. The energy has not been destroyed; it just can no longer be used. Could the energy expended in vibrational re-attunement be heading towards an entropic state?

Altho the harmonic sequence of each Primary System has no upper limit since it extends to infinity, is it possible that Reality will "wear itself out" before it nears infinity? Is there a point before infinity where the multiplicity of Reality Lines becomes so diverse that the amount of energy in the universe is spread out among so many realities that it goes entropic?

The end of the Omniverse could occur before the end of the universe, i.e., before the energy of a universe was too distended within its single dimensional parameters. The end of the Omniverse would come when the universe's energy was spread out among too many possible Reality Lines. What would occur after the Omniverse dragged all its universes into entropy is beyond human reckoning. Perhaps the Omniverse and its participating universes are a "one shot" phenomenon. Perhaps a new 1 CPU matrix is somehow formed from the possibility-exhausted old Omniverse, the ultimate resimplification.

With these omni-cosmological speculations in mind, we will conclude the last section in this treatise on Reality. In reviewing the extrapolations and conclusions contained herein, we find that the rhetorical question "What is Reality?" may not be beyond human exploration and objective definition. Yet the question, "Why is Reality?" may ever be.

FOOTNOTES

1 In Flash #129 ("Double Danger on Earth"), a newspaper headline proclaims: "Flash From Other Earth Here To Save His Own" (p. 18), which if taken seriously by the general populace of "Earth-One" signifies that the existence of parallel dimensions has become common knowledge.

2 This "vibrational barrier land" also appears in JLA #46-47, as the realm the Anti-Matter Man is traversing, in JLA #73-74 as the realm the JSA is hurled into after "Earth-Two" is willed out of existence, in JLA #82-83 as a realm that contains a "spot exactly between the dimensions" of "Earth-One" and "Earth-Two," and in JLA #91-92 as a region in which some youthful alien joyriders warped into with their spaceship.

3 Coincidentally enough, a menace requiring the greatest heroes of both worlds always seems to crop up.

4 Even before O'Neil proffered his "time of conjunction" modification, writers have been ignoring the "focal point" concept except in the pages of The Flash. It seems like Flash was the only one to use focal points.

5 p. 20.

6 It is surprising that the Transmatter Cube was not put into use long before JLA #107 in 1973, since eleven years earlier in Flash #129, a dimensional machine was built by Jay (Flash) Garrick to teleport meteor fragments to "Earth-Two." Other dimensional machines were mentioned before 1973. Ray (Atom) Palmer built one in Atom #29 to travel to "Earth-Two." In Atom #36, Al Pratt of "Earth-Two" had an "atomic vibrator" in his belt buckle, perhaps the tiniest dimensional machine ever built. None of these devices were mentioned after the issue they appeared in.

7 p. 5.

8 p. 15.

9 p. 6.

10 Namely, "Earth-One," "Earth-Two," and "Earth-Three." It is interesting to note that even if the various superheroes suspected the existence of other dimensions than these, they never set out to discover them. It isn't until JLA #107 that a fourth Earth is discovered, and then it was by accident.

11 A foreshadowing of this phenomenon occurred in the very first parallel Earth

story in Flash #123. The "Earth-One" Flash is said to have read of the exploits of his "Earth-Two" counterpart in comic books, which were written by Gardner Fox based on dreams he had. Apparently the Gardner Fox who wrote the Golden Age Flash tales on "Earth-One" is a dimensional counterpart to the Gardner Fox on the "real Earth" who wrote Flash #123 We are still left with the conundrum: do writers shape the reality of the worlds they write about (as in Cary Bates), or does the reality of a world shape what the writers write (as in Gardner Fox)?

12 Fellow comicologist Dave Lofvers argues that we comic readers do not really live on "Earth-Prime" since he is not convinced the Cary Bates of our world truly participated in JLA #123 as chronicled. A possible test to see if this is "Earth-Prime" would be to ascertain whether editor Julius Schwartz actually has the Cosmic Treadmill that Flash left him in Flash #179.

13 The only story that intimates in any way the relationship of anti-matter dimensions to the vibratory nature of positive matter dimensions is JLA #74 where Green Lantern points out to his comrades an "entrance" to an anti-matter universe while travelling thru the vibrational barrier lands between "Earth-One" and "Two." Altho not inferred, this could be the rift that the Anti-matter Man of JLA #46 came out of since the A-M man was wandering in this region at the time. The rift looks nothing like the "Transformer Bridge" leading to Qward. Still the only thing that can definitively be said about the relationship of anti-matter worlds within the vibratory structure of reality is that there are holes to get to them both on Earth and between Earths.

14 p. 9.

15 A good deal of confusion has been caused by Stan Lee and Jack Kirby in regard to what happens when matter and anti-matter meet. In FF Annual #6, Reed Richards says, "If ever one of us dared make contact with any type of negative being, the ensuing explosion would start an immediate chain reaction of such unimaginable magnitude that it could destroy an entire world." p. 37). Reed seemed to have forgotten that earlier (on p. 14) he had just punched out the anti-matter being Annihilus and nothing happened except he hurt his fist. One would think that in order to even transcend the barrier into an anti-matter universe, one would have to be converted into anti-matter oneself (a theory borne out by p. 19 of Captain Marvel #17, scripted by Roy Thomas).

16 Roy Thomas, the writer instrumental in explaining the present whereabouts of a good many Golden Age characters (such as Red Raven, the Whizzer, Marvel Boy,

Toro) admitted Marvel's leariness of doing dimensional counterpart stories in the letter column of Avengers #89.

17 It is amusing to note that when the High Evolutionary moved Counter-Earth one second out of synchronization with "Marvel-Earth" so its denizens would be unaware of its existence, he overlooked the fact that now the Earth that exists one second out of sink with "Marvel-Earth" risks discovering Counter-Earth

18 p. 17.

19 p. 14.

20 "Realistic" is used relatively here. The Marvel heroes are, for the most part, humanoid in form just like here on our Earth, instead of looking like anthropomomorphic ducks.

21 Besides granting the same degree of reality to all literary characters, this premise means that even stories that purport to be imaginary may not be. In other words, the "Imaginary Tales" intentionally perpetrated by Mort Weisinger and unintentionally by Murray Boltinoff, may be anathema to readers' sensibilities, but in an infinite number of universes there is more than enough room for any editor's discrepancies. By numerical count of the number of versions of the same character, Superman probably exists on more different dimensions than any other character in comics. Batman would be a far second.

22 This property, which will be referred to as the Non-homeostatic Property, will be thoroughly examined under "Dimensional Travel."

23 Besides Gardner Fox and Cary Bates,already noted, writer Steve Gerber reveals his relationship to his fictional reality in Man-Thing #22, to be discussed under "Case Studies."

24 The extent of space that affects the reality of a world is questioned in "The Omniverse" section under "Homogeneity."

25 An excellent source for the basic mathematics utilized in this treatise is George Gamow's One, Two, Three...Infinity, specifically pp. 3-39.

26 Pitch is determined by frequency (the number of times an object vibrates per unit-time). One will note usage of the terminology of sound in our discussion because vibrations produce sound. Each universe, then, has its own unique sound (pitch) determined by its vibration rate. One cannot hear this sound because one is a part of it, contributing to it.

27 This is not done to give Earth-variants a more important position in the

Omniverse, but because the characteristics of parallel Earths are more clearly documented. The theory of the Omniverse presented in this treatise is only one of perhaps many possible mathematical constructs.

28 The reason why the author persists in putting quotation marks around designations for parallel Earths is because the labels are arbitrary, and as we shall see, do not even label a single dimension for very long.

29 The term "Prime Earth," indispensable to our discussion, should not be confused with "Earth-Prime," the name given to the Earth Car Bates comes from in Justice League #123. The term "Earth-Prime" as a designation for the "real Earth" is purposely avoided in this treatise.

30 The word "Creation" is used here to refer to the hypothetical Origin of the universe or Beginning of Time, and is not meant to have any specific connotations as to HOW the universe or time began. Metaphysical questions are reserved for the section entitled "The Omniverse."

31 The term "instant" is simply our unit-time. We shall loosely define it as "the smallest amount of time that something can happen in."

32 This is also a good justification for the usage of the word PARALLEL Earths.

33 We are not excluding the possibility that a Reality Line could diverge into more than two branches at any instant. Admittedly, any instant has many possible random alternatives. however, for the sake of simplicity, we shall be solely employing binary examples.

34 Science fiction author Larry Niven explores the premise that EVERY single action spawns in Reality Line in his story, "All the Myriad Ways"(which was adapted in comic form by Howie Chaykin in Unknown Worlds of Science Fiction #5). The main theme of the story was the cultural shock that might occur when people learned that "every decision was made both ways. And if every choice was cancelled elsewhere, why make a decision at all?" (p. 33)

35 Science fiction author Ross Rocklynne contributes a term for individuals who cause Divergent Factors, "Diversifal," from his 1951 short story by that same name,

36 The watcher first appeared in Fantastic Four #13 as a cosmic entity who observed the ways of mankind from his base on the moon. The Oracle was introduced in Justice League #100 as a cosmic entity with magical attributes.

37 In other words, looking back at World War II, one can surmise "The world sure would be different today if the allies had lost the war," Or looking

back at the penny that slipped thru a hole in one's pocket, one can think, "I guess it didn't matter." Divergent Factors can best be determined by examining the consequences of an event AFTER it's taken place. Not very scientific, but at present, it's all we can do.

38 Implicit is the assumption that all Earths are not as easily accessible by evidence that many dimensional cross-overs have not taken place (e.g., Flash has never found himself in the dimension of Archie and Jughead) and that some crossovers occur so frequently (the path between "Earth-One" and and "Two" is a well beaten one.

39 We are postulating the existence of some phenomenon that acts as a sort of a Harmonic Barrier, hampering dimensional travel to some places.

40 This is essentially the same rationale we gave for why Reality Lines on our diagram were drawn parallel.

41 What happens if two Reality Lines diverge at exactly the same Atomic Instant, one might ask. The author can only conjecture. Perhaps the Primary System with the lowest Prime Earth gets it.

42 We use the closest harmonic multiples in our diagram in order to be systematic, i.e., to prove we can account for all whole numbers between 1 and infinity within our system.

43 The prime number 1 is a vibration right will be discussed in "The Omniverse." The ten prime vibration rates not included in FIGURE 6 (13, 17, 19 23, 29, 31, 37, 41, 43, and 47) would undoubtedly alter the whole pattern with their inclusion. In the instance of 2x19=38, it took four generations of divergences to produce 38, whereas it would be in the 19 Primary System's first generation. In order to be truly complete, one would have you chart all the numbers to infinity on a diagram, and then one would only have a complete diagram of one possible pattern out of an infinite number. An infinite number of patterns of an infinite number of numbers equals...?

44 "Harmonic sequence" is defined as the whole number multiples of a prime number in ascending order. The harmonic sequence for the first three primes would be calculated thusly:

(2x1)=2	(3x1)=3	(5x1)=5
(2x2)=4	(3x2)=6	(5x2)=10
(2x3)=4	(3x3)=9	(5x3)=15
(2x4)=8	(3x4)=12	(5x4)=20
(2x5)=10	(3x5)=15	(5x5)=25
etc.	etc.	etc.

45 The word "transitional" was selected to connote "transit" or the capacity of being vibrated into, and not to connote "transition" or being in an intermediary state. "Transitional" was chosen over "Transitory" which seems to suggest impermanence rather than dimensional accessibility.

46 Altho Roy Thomas undoubtedly conceived of the Squadron Supreme as a satire of the Justice league, the characters were treated seriously in the context of the story. Even if they hadn't been, by virtue of being depicted at all, the Squadron would be granted their legitimacy in the pantheon of dimensional counterparts. For the record, the counterparts are as follows: Superman = Hyperion, Batman = Nighthawk, Flash = Whizzer, Green Lantern = Dr. Spectrum, Green Arrow = Hawkeye (later Golden Archer), Atom = Tom Thumb, Hawkman = American Eagle (later Cap'n Hawk), Black Canary = Lady Lark, and Aquaman = Amphibian.

47 Doctor Doom's time machine was first intentionally used for dimension travel in Fantastic Four #152, altho the Scarlet Centurian used it to transport the Avengers to an alternate Earth in Avengers Annual #2. The close relationship between time and dimension travel is fully investigated in the section on "Time Travel."

48 This is assuming fairly regular visits, like the annual JLA-JSA crossover. There is, of course, no set frequency for Divergent Factors, and the frequency may vary from one Primary System to another, but it is reasonable to assume that the Earth one wishes to visit will not have a significantly greater number of divergences than one's home Earth in a given amount of time.

49 The traveller may not even be aware that the reason why the dimension has a different vibration rate is because there are now two dimensions which had been one.

50 This is assuming that Flash has biofeedback to be able to feel what vibration rate is he is attaining. It is possible and very likely that Flash simply begins to vibrate and keeps going faster until he materializes in the first dimension he comes to, which he assumes to be "Earth-Two." In other words, Flash would not necessarily know "Earth-Two" had "moved," just as long as it was always the first dimension he hit.

51 Actually, it doesn't depict ALL the overtones. No overtones would constantly be coming into potentiality, just as the old overtones were being "used up" i.e., passing out of actuality.

52 Science fiction enthusiast David Truesdale pointed out to the author that

the body of evidence to support the Non-homeostatic Property is circumstantial. In Flash #123, Flash was unaware at first that he had dimension travelled, which would support the assumption that he did not have to CONSCIOUSLY maintain the vibration rate of "Earth-Two" to keep him slipping back into his home dimension. However, it could be argued that Flash is a special case since he has mastery over his molecules. In Justice League #21, Doctor Fate uses magic to transport his comrades to "Earth-One," and none of the visitors demonstrated any tendency to slip back into his own dimension. However, the magic spell could have interfered with this tendency. The only long range documentation of a person living permanently on another Earth is Black Canary, who moved from "Earth-Two" to "Earth-One" in Justice League #75. But she, too, has super-powered energy in her (absorbed from Aquarius the Living Star in Justice League #74) and this may affect the validity of using her to prove that matter has no tendency to slip back into its original vibrational niche. There will be no conclusive evidence until a non-superpowered being attempts to live in another dimension for an extended period of time. Until demonstrated otherwise, we will assume the Non-homeostatic Property is operative.

53 Referring once more to Larry Niven's "All the Myriad Ways," the sf author describes one means of finding one's home Earth again: leaving a homing device. "To return, the pilot cruised to the band of probabilities until he found a signal marking his own present. Only it didn't. The pilot always found a clump of signals. The longer the journey, the broader the band." This phenomenon would also occur in our less complex system of divergences. If a Reality Line diverged that had the signal on it, there would be two worlds with identical signals. But it would make finding the two a lot easier.

54 We will discuss the implications of this fully under "Unactualized Vibration Rates" in the "Time Travel" section.

55 Not returning to one's home dimension would not be a Divergent Factor in itself, but one's absence could eventually make a difference if one were a Diversifal.

56 It should be pointed out here for those who never thought about it, that the Superman of "Earth-One" and "Two" were once the very same entity before coming to Earth at twenty-year intervals. The author proposes that the infant Kal-el diverged during his journey from Krypton to Earth when his rocket both did and didn't encounter some difficulty in space (a kryptonite meteor storm perhaps?) which caused a twenty-year differential between times the rock-

et arrived on Earth. (The infant was undoubtedly in suspended animation since the craft showed minimum life support capacity.) The arrival of the star child may well have been the Divergent Factor that diverged "Earth-One" and "Two" in the first place.

58 The two could purposely try to cause a divergence, but their meeting alone would not do it. As we shall see in our section on "Time Travel," paradoxes cannot occur in multi-dimensional Reality.

58 Once the traveller diverged, there would be no reason why both selves would decide to go home at the same time. But eventually, both of the selves would end up with the same problem: each other.

59 There's always the possibility that one will decide to become a fulltime dimensional traveller.

60 Thanks go to admired parent Myron Gruenwald for assistance in sorting thru the solutions to the problem of dimension travel.

61 p. 13.

62 p. 27.

63 p. 14,

64 There is a possibility that Focal Points don't even exist, since they've only been reported by one dimensional traveller, the Flash. Maybe the only reason Flash always vibrates from from the same spot is that he wants to know in advance where on "Earth-Two" he's going to end up—a grassy field. A Nexus has been reported by a number of characters, and would appear to be an actual phenomenon.

65 If phenomena between universes acts like phenomena within universes, our case for hole size-fluctuations is not without precedents. Astronomy abounds in cyclical phenomena from the pulsations of quasars to the 11-year sunspot cycle.

66 Perhaps Lockjaw's power does not involve mentally changing vibration rates, but rather sniffing out certain Nexuses.

67 Perhaps we should make the distinction at this point between "Magic dimensions" and "scientific" dimensions where magic also exists. In magic dimensions, magic is governed by its own natural laws and logic that may have nothing to do with the natural scientific laws as we know them on Earth. Where true magic (as opposed to the seeming magic of advanced technology) exists on the Earths, it would appear to be a scientifically explainable form of energy.

To wit, in World's Finest #207, Dr. Light states "Only I could have learned that real magic...gives off a faint light-energy as it expands itself..." (p. 22) In Superman #273 a scientist states, "I theorized that magical force, like cosmic rays, travels in waves, throughout the universe." (p.5) In Marvel Premiere #13, Sise-neg speaks of mystical energy in terms that apply to any other form of energy in the universe (p. 31). Thus magic on earth would appear to be just another wave-length phenomenon. As far as what the wave-length might be, the author theorizes that it corresponds to that of red sun radiation. This would mean that Superman's two weaknesses are actually the same thing.

68 By definition, Howard the Ducks's home dimension would be in the "Alien" category.

69 For further explanation, see Gamow, op. cit., pp. 16-20,

70 Assuming that transition was harmonically possible.

71 As far as transitions between fractional dimensions of the same Primary System, one would surmise it would only be harmonically possible between fractions with common denominators, e.g., $^3/_5$ and $^4/_5$, $^1/_3$ and $^2/_3$, $^3/_4$ and $^1/_2$ ($^2/_4$), etc.

72 This could result in such calamitous occurrences as Dr. Strange seeking Dormammu's dimension and finding Mr. Mxyzptlk's instead.

73 The author does speculate that there may be dimensions whose vibration rates correspond to irrational numbers, i.e., numbers not expressible as the quotient of two integers, such as pi and the square root of three. These would be the dimensions with inconsistent natural laws.

74 Vibration rate 0 CPU is discussed under "Time Travel," and 1 CPU under "The Omniverse."

75 For example, the intervention of the "Earth-One" and "Earth-Two" crusaders in the affairs of "Earth-X" in Justice League #107. The JLA-JSA obviously thought the Nazis being in power was a bad alternative, so they helped the Freedom Fighters make the reality of their world closer to that of "Earth-One"/"Two." Of course, the JLA-JSA intervention caused a Divergent Factor, which means there is still an Earth where they didn't intervene, and the Freedom Fighters are still fighting the Nazis.

76 We will discuss one such occurrence involving Justice League #103, Thor #207 and Amazing Adventures #16 under this section's "Case Studies."

77 Another piece of evidence that quote "Earth-One" and and "Marvel-Earth" are in different Primary Systems is the vastly divergent characteristics of the denizens of the neighboring planet Mars.

78 After a divergence reality of the two new reality lines have no responsibility to one another. Thus, the generations of people procreated after a divergence need not be the same on both Earths. In some cases, two persons who become parents in one variant, would never meet. never procreate, or procreate at a different time so the resultant child would be genetically different. For example, the Bruce Wayne of "Earth-Two" is considerably older than that of "Earth-One." Altho they have the same name and fathers who are probably true dimensional counterparts (to determine whether the mother's were true counterparts would have to know their maiden names), the two Bruce Waynes are NOT true dimensional counterparts, i.e., genetically identical beings who were once the same person before a divergence. The age difference is proof of that. "Earth-One's" Bruce Wayne might even have read Detective Comics (like Barry Allen read Flash Comics), and inspired by the similarities between his background and the "comic character's," decided to call himself Batman. The Oliver Queens of both Earths are not true dimensional counterparts either despite their alter egos' names. However, the "Earth-One" and "Earth-Two" Wonder Women may well be true dimensional counterparts (what's twenty years to an immortal?). The Divergent Factor in their lives was probably Steve Trevor's plane crashing on Paradise Island. (Trevor would not be a true counterpart). A chart of true and nominal counterparts appears following the footnotes.

79 Superman #300 depicts one of these alternate worlds. In this case, Kal-el did not arrive on Earth until the 70's.

80 The Kree-Skrull War was chronicled by Roy Thomas in Avengers #89-97.

81 The author's solution to this dilemma is that the Guardians' records of the past are misleading. Perhaps dimension travel was commonplace enough at one time that there were recorded accounts of alternate pasts. These records happened to survive the massive obliteration of Earth by the Badoon in 3007, whereas the records of their own past did not.

82 All stories that involve a plot to take over the world would account for Divergent Factors if these plots succeeded.

83 p. 1.

84 Why Creator-2 had to place the vibration rate-changing device inside the Red

Tornado's head is not apparent.

85 See Footnote 78.

86 "Earth-Prime" may be in a primary system other than "Earth-One" if the two Earths suddenly passed out of transition, that would explain why Flash could not vibrate from it without artificial help. The author conjectures that "Earth-One" and "Earth-Prime" are in the same Primary System, however, as evidenced by Cary Bates' seeming ease at transcending their vibrational differences.

87 p. 15.

88 The section on the Omniverse will deal with universal differences in reality.

89 p. 16.

90 p. 24.

91 One would surmise that either the publishers or the writer felt that having them fail from different Earths would be confusing to the mass market and hurt commercial appeal.

92 Stories like this set back the layman's understanding of reality many years.

93 p. 16.

94 p. 11.

95 As it is referred to, in fact, in Fantastic Four #152 (p. 11).

96 As it was pointed out in Footnote 67 magic is just another wave-length phenomena. Except for the color of the energy, magic and power-beams are about the same thing: both convert thoughts into actuality.

97 The Flash does have descendents in the Metropolis of the Legion's era (as revealed in Adventure #373), but he could have descendants on any future Earth stemming from his Reality Line.

98 Dr. Doom's time machine is the exception in that it has the ability to travel to whatever future it is set, rather than always taking one up the same Reality Lines.

99 Marvel Team-Up #45 to be discussed under Case Studies, for a recent example.

100 Avengers #56, for example.

101 Innumerable stories, notably Superman #146.

102 Particularly Justice League #63, to be discussed under Case Studies.

103 There are also some minor oddities and inconsistencies about Time Travel, that having occurred in only one story, do not merit consideration as a "Known." An example would be the premise, "An invention doesn't work until the time era it has been invented," proffered in Wonder Woman #101. This premise can be dismissed as highly improbable for two reasons: one, the natural principles upon which all inventions are based are constant, and two, it would mean anyone travelling to a time before time travel was invented would be stranded there. This premise is a corollary of the maxim, "Reality is only what men perceive it to be," the subjective reality argument, e.g., at one time the Earth WAS flat and at the center of the universes, and gods are real only as long as men believe in them. Altho it is possible this could be true on some magical dimension, Earths are governed by scientific laws by nature. In order to have any objective theory, one must reject the anthropocentric view of Reality.

104 Altho this flow is natural, it is not necessarily consistent from one Reality Line to the next. Objectively, time would flow proportionately to the vibration rate (which means it is getting faster as the vibration rates get higher on the harmonic sequence). Each Reality Line's time would flow at a unique, ever-changing rate. Dimensional travellers' watches are always inaccurate, losing seconds here and there. See the section on "The Omniverse."

105 In Justice League #33, Superman states "There are as many ways to travel across time as there are to travel across space." (p. 12)

106 The only method of time travel possible without "jumping" is suspended animation, which only simulates time travel. With suspended animation, one's mind is not subjectively conscious of the passage of time and one's body is physically rendered resistant to the EFFECTS of aging, altho not aging itself. Suspended animation is also only a one-way trip.

107 At Marvel, there is Immortus (Avengers #10) and the Space Phantom (Avengers #2). At DC, there is the Timeless One (Justice League #33) and Tempus (Flash #215).

108 In the Life Science Library book on Time, there is described a scientific game of billiards that demonstrates entropy in a closed system and gives the odds for entropy to be reversed in various systems (pp. 170-172). The collision of billiard balls would be analagous to the vibrations of molecules in matter.

109 What determines whether one dawdles in the Timeless World or careens thru it? It would undoubtedly have to do with will power, pre-deciding how long one wishes the subjective experience of "no time" shall last. It would be something along the order of deciding to remember one's dream.

110 It is a source of amazement how time travellers like Superman or Silver Surfer can calibrate their speed/determine their destination flying thru time as they do without a speedometer or chronometer or anything. Is it possible they can "feel" how fast to go to get them so many years? How can they calibrate it so accurately? Perhaps the stories do not depict the trial and error hopscotching they go thru in order to find the right date, in interests of brevity.

111 The use of the term "sideways" is related to "crossways in time" and applies to our flat diagram. The notion of right and left Sideways Slippage is insignificant because we are arbitrarily determining when a dimension diverges which branch should have what vibrational value.

112 To my knowledge, no one on the Reality Line where this treatise is being written has a time machine, or the author would ask him.

113 These future worlds in another Primary System would all be transitional.

114 We will discuss the implications of trying to change a definitive past in this section.

115 They are not getting larger either. Altho there are more and more worlds to actualize rates on a harmonic sequence, the vibration rate of each Primary System's Prime Earth determines a fixed "spacing" between all Harmonic Earths no matter how high and numerous the actualized vibration rates get. The Omniverse expands, but does not get denser.

116 The Funneling Effect will, if not keep you in your own past all of the time, keep you in pasts that are not too dissimilar.

117 This would even include the very destruction of the Earth itself (such as witnessed in Dr. Strange #13). The annihilation of the Earth at one vibration rate would have no effect on the other dimensional Earths, and would be significant enough to cause a divergence so that even the Earth that had been destroyed WAS NOT destroyed in one of its predecessing Reality Lines.

118 Not even the classic time paradox where one travels into the past and accidentally kills one's grandfather before one's father is conceived is a paradox anymore. Killing one's grandfather will only produce a new Reality Line

in which one has no dimensional counterpart. It will do nothing to affect one's reality, only one's conscience.

119 While we're on the subject, how was it that Daredevil was able to free himself from the "Phantom Zone" in Daredevil #41? The story would have one believe that DD got himself back into synchronization with "Marvel-Earth" by hitching a ride on the back of a moving Volkswagen, but how was his billy-club cable able to attach itself to anything if it was just as immaterial as he was? My guess is that the effect of the T-Gun just wore off and Daredevil had no overt part in getting back into sync.

120 p. 21.

121 Of course there still is a Reality Line where the Defenders did not come to the aid of the Guardians and Earth 3007 is still under Badoon tyranny. But at least one line is free.

122 p. 39.

123 Ibid.

124 p. 13.

125 p. 5.

126 p. 10.

127 One wonders where Green Lantern was at the time of the disaster that produced Kamandi's world. I surmise that the disaster occurred on a Reality Line where Abin Sur never gave the Earth a Green Lantern, but where there was a Superman (as established in Kamandi #29).

128 p. 30.

129 Wonder Woman's "Impossible Family" tales featuring herself as a woman, teen, and child co-existing at once were not so impossible after all.

130 It is interesting to note that Earthmen of the future possess time travel but the ancient Guardians do not. The Guardians' explanation is, "We cannot travel in time under penalty of losing our immortality." (p. 22) This cannot be any fault of time travel; it must have to do with how the Guardians are immortal.

131 p. 31.

132 Immortus states "Five lives I have known..." (Avengers #133, p. 6): Victor von Doom (introduced in Fantastic Four #5), Rama Tut (introduced in Fantastic

Four #19, surmised to be Doom in FF Annual #3), Kang the Conqueror (introduced and revealed as Rama Tut in Avengers #8), Scarlet Centurian (introduced and revealed as Kang in Avengers Annual #2) and Immortus (introduced in Avengers #10, but revealed as Kang/Tut in Giant-Size Avengers #3. At the rate Immortus is going, one had better not rule out Thulsa Doom (Kull #1) and Sise-neg (Premiere #12) from counterpart candidacy.

133 p. 8.

134 pp. 27-30.

135 p. 30.

136 If it seems bothersome that Warlock has flipped out of the Marvel mainstream universe, recall that he wasn't in it in the first place. When he left Counter-Earth after being crucified in Hulk #178, Counter-Earth was still out of sync with "Marvel-Earth." Perhaps Warlock is now even closer to the vibration rate of "Marvel-Earth." Perhaps revelations in the section on "The Omniverse will render this matter moot.

137 p. 8.

138 p. 31.

139 p. 3.

140 p. 31.

141 Specifically on p. 17, panel 1, and p. 24, panel 2.

CATALOG OF COUNTERPARTS

The following is a list of stories involving dimensional counterparts. True counterparts, those genetically identical entities who once were one before a divergence are indicated by "T," while nominal counterparts, those entities who, despite identical names, were never one person, are indicated by "N."

Johnny Thunder	Justice League #37	N
Dick Grayson	Justice League #91	N
Superman	Justice League #73	T
Larry Lance	Brave & Bold #91	N
Reed Richards	Fantastic Four #118	T
Oliver Queen	Justice League #100	N
Nelson Rockefeller	Avengers #147	T
Johnny Storm	Fantastic Four #163	T

GLOSSARY

Asterisk denotes terms or definitions originated by author for this text

ATOMIC INSTANT Everything that occurs everywhere in a Phenomenal Field during an instant of time.

CHRONAL DISPLACEMENT INERTIA* The escape velocity that must be generated to break free from the Timestream.

CYCLES PER UNIT-TIME* (CPU) The units used to express vibration rates.

DIMENSION A self-contained system of independent Reality.

DIMENSIONAL ENTROPY* The ultimate dispersion of energy over so many dimensions that the energy is in too low a potential state to move within the Omniverse.

DIVERGENT FACTOR* Any phenomenon significant enough to cause a Reality Line to diverge.

FOCAL POINT A physical space where a Nexus will appear at a Time of Conjunction.

FRACTIONAL DIMENSION* A dimension whose vibration rate corresponds to a non-whole number; dimensions which are not Earth-variants.

FUNNELING EFFECT* The tendency of a time traveller journeying into the past to remain near to the Reality Lines of his own (remembered) past.

HARMONIC EARTH* Any dimension actualizing vibration rates on the same harmonic sequence; all dimensions in the same Primary System.

HARMONIC SEQUENCE Whole number multiples of a prime number in ascending order.

HETEROGENEOUS REALITY* Interlocking fields of homogeneous Reality within the dimension.

HOMOGENEOUS REALITY* An area with the same vibration rate.

INFINITESIMAL VIBRATION RATE* The smallest fractional amount of vibrational variance that can correspond to a unique separate dimension.

LIMBO or TIMELESS WORLD The trans-temporal medium possessing vibration rate zero thru which the traveller must pass in order to time travel.

NEXUS A set of equivalent natural dimensional apertures allowing passage between two dimensions.

NON-HOMEOSTATIC PROPERTY* The property that matter shows no tendency to spontaneously revert to a former vibration rate after being attuned to a new vibration rate.

OMNIVERSE* The single unified continuum of parallel dimensions.

PHENOMENAL FIELD The smallest possible environment containing all the in-teracting elements that could contribute to a Divergent Factor.

PRIMARY SYSTEM* Dimensions actualising the harmonic sequence of a Prime Earth.

PRIME EARTH* or PRIME UNIVERSE* Dimen-sions whose vibration rates correspond to prime numbers.

REALITY

LOCAL REALITY The transient state of being comprised by empirical phenomena within a Phenomenal Field, produced by one and only one sequence of other states of being.

OMNIVERSAL REALITY The transient state of being comprised by empirical phenomena, Omniversal in scope, produced by one and only one sequence of other states of being.

SATELLITE SYSTEM* A system of fractional dimensions in which they remain at fixed vibrational differences from whole number Primary Systems.

SIDEWAYS SLIPPAGE* The tendency of a time traveller to veer from a "straight" path along Reality Lines.

TIME The energy matrix that gives structure to Reality Lines by ordering the sequence of events and gives structure to the Omniverse by holding Reality Lines in place relative to one another.

TIMESTREAM The natural flow of time down the Reality Lines proportionate to each Reality Line's vibration rate.

TIME OF CONJUNCTION The sone of time when the sizes of natural dimensional apertures in equivalent geographic areas are in congruence, permitting dimension travel.

TRANSFINITE Greater than infinite.

TRANSITIONAL EARTHS* Earths from separate Primary Systems whose vibration rates are products or multiples of products of each's Prime Earth; Earths in other primary Systems which are accessible to the traveller.

UNACTUALIZED VIBRATION RATE* A vibration rate that no longer corresponds to any existant Reality Line, or has yet to come into existence.

UNIVERSE A self-contained system of independent Reality: a dimension.

VIBRATION RATE The cycle corresponding to the inherent property of matter in which its molecules are in periodic motion.

CATALOG OF PARALLEL EARTHS

Earth Name	Identifying Characteristic	First Definitive Appearence
EARTH-ONE	Justice League of America	Flash #123
EARTH-TWO	Justice Society of America	Flash #123
EARTH THREE	Crime Syndicate	Justice League #29
EARTH-A	Criminal Justice League	Justice League #37
EARTH-X	Freedom Fighters	Justice League #107
EARTH-S	Captain Marvel, Fawcett heroes	Justice League #134
EARTH-T*	Tarzan, John Carter, Pellucidar	Tarzan #207
EARTH-B	Editor Boltinoff's Inconsistencies	Brave & Bold
EARTH-PRIME	Mutant Cary Bates	Flash #179
EARTH-M*	Marvel heroes	Fantastic Four #1
EARTH-Q*	Squadron Supreme	Avengers #85
EARTH-C*	Scarlet Centurian, original Avengers	Avengers Annual #2
EARTH-F*	Reed Richards=Thing, Johnny Storm=Gaard	Fantastic Four #118
EARTH-P*	Planet of the Apes	Planet of the Apes #1
EARTH-W*	War of the Worlds	Amazing Adventures #18
EARTH-REAL*	Treatise on Reality in Comic Literature	

*Asterisk denotes nomenclature assigned by the author.

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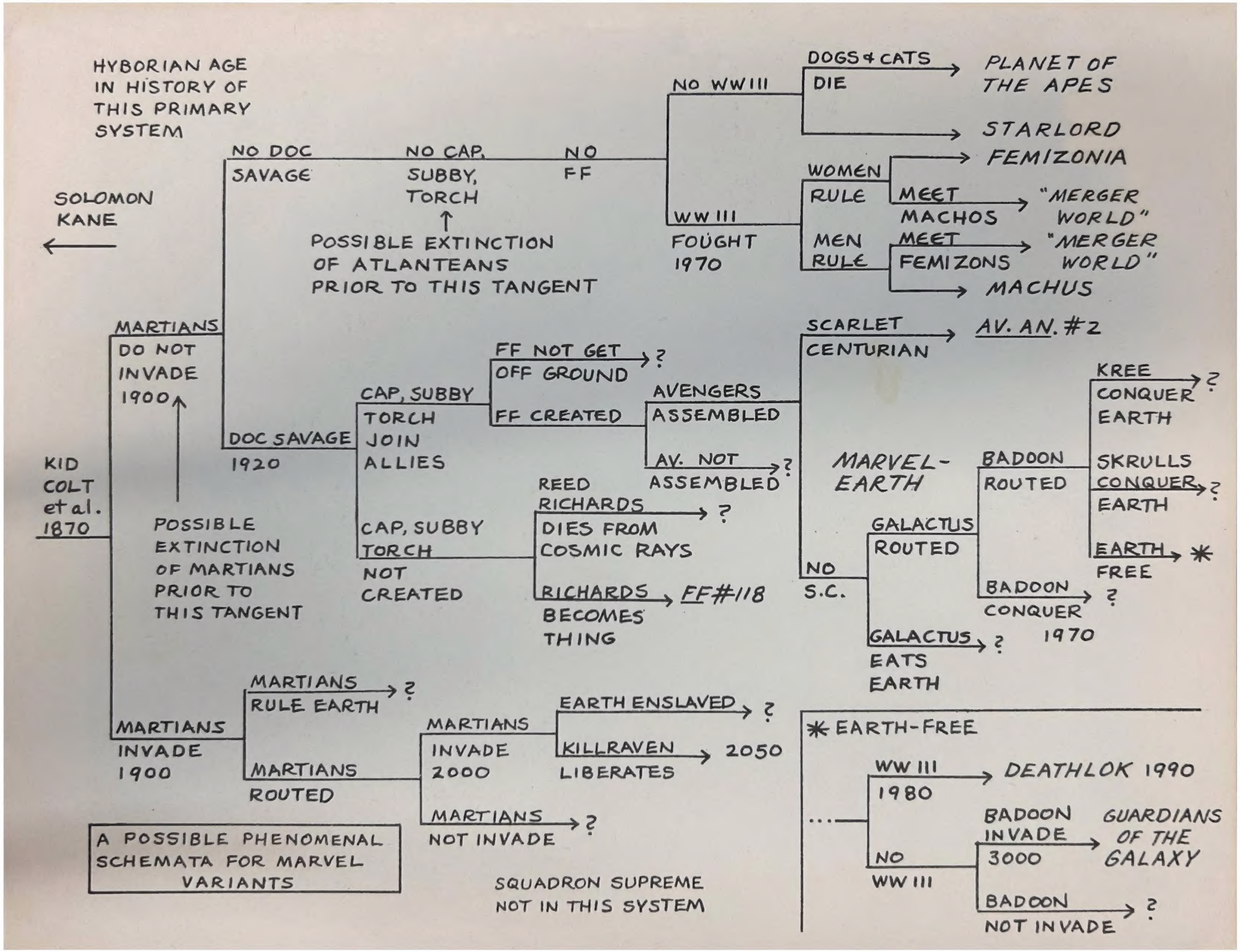
HYBORIAN AGE IN HISTORY OF THIS PRIMARY SYSTEM
SOLOMON KANE
NO DOC SAVAGE
NO CAP, SUBBY, TORCH
NO FF
POSSIBLE EXTINCTION OF ATLANTEANS PRIOR TO THIS TANGENT
NO WWIII
WW III FOUGHT 1970
DOGS & CATS DIE
PLANET OF THE APES
STARLORD FEMIZONIA
WOMEN RULE
MEET MACHOS
"MERGER WORLD"
MEN RULE
MEET FEMIZONS
"MERGER WORLD"
MACHUS
MARTIANS DO NOT INVADE 1900
KID COLT et al. 1870
POSSIBLE EXTINCTION OF MARTIANS PRIOR TO THIS TANGENT
DOC SAVAGE 1920
CAP, SUBBY TORCH JOIN ALLIES
CAP, SUBBY TORCH NOT CREATED
FF NOT GET OFF GROUND
FF CREATED
REED RICHARDS DIES FROM COSMIC RAYS
RICHARDS BECOMES THING
FF#118
AVENGERS ASSEMBLED
AV. NOT ASSEMBLED
SCARLET CENTURIAN
AV. AN. #2
MARVEL-EARTH
KREE CONQUER EARTH
SKRULLS CONQUER EARTH
EARTH FREE
BADOON ROUTED
BADOON CONQUER 1970
NO S.C.
GALACTUS ROUTED
GALACTUS EATS EARTH
MARTIANS INVADE 1900
MARTIANS RULE EARTH
MARTIANS ROUTED
MARTIANS INVADE 2000
EARTH ENSLAVED
KILLRAVEN LIBERATES
2050
MARTIANS NOT INVADE
A POSSIBLE PHENOMENAL SCHEMATA FOR MARVEL VARIANTS
SQUADRON SUPREME NOT IN THIS SYSTEM
* EARTH-FREE
WW III 1980
DEATHLOK 1990
BADOON INVADE 3000
GUARDIANS OF THE GALAXY
NO WW III
BADOON NOT INVADE

Photo by Carol Hellstrom